

Incremental Heating		36Ar(a) [fA]	37Ar(ca) [fA]	38Ar(cl) [fA]	39Ar(k) [fA]	40Ar(r) [fA]	Age ± 2σ (ka)	40Ar(r) (%)	39Ar(k) (%)	K/Ca ± 2σ
15D10306	2.0 %	0.6971382	65.1926	5.546184	189.3194	29.70029	501.4 ± 29.5	12.59	4.99	1.249 ± 0.013
15D10308	2.2 %	0.6278347	72.3728	4.669068	182.8930	29.17826	509.9 ± 28.5	13.58	4.82	1.087 ± 0.011
15D10309	2.4 %	0.3080111	35.6235	2.168002	87.8131	14.90563	542.5 ± 40.9	14.06	2.31	1.060 ± 0.017
15D10310	2.6 %	0.5540815	102.1165	3.494237	193.5573	30.90593	510.3 ± 25.2	15.86	5.10	0.815 ± 0.007
15D10312	2.8 %	0.4860847	118.6183	2.481743	192.0312	27.78024	462.4 ± 23.3	16.19	5.06	0.696 ± 0.006
15D10313	3.0 %	0.3039998	79.7355	1.263055	119.5891	19.54442	522.3 ± 30.6	17.85	3.15	0.645 ± 0.006
15D10314	3.3 %	0.3688552	127.7322	1.205307	171.3287	26.39288	492.4 ± 22.2	19.47	4.51	0.577 ± 0.005
15D10315	3.6 %	0.1838821	55.1477	0.487867	73.3541	11.28203	491.6 ± 38.3	17.17	1.93	0.572 ± 0.007
15D10317	3.9 % ✓	0.2353922	80.1794	0.540741	102.2847	14.36756	449.0 ± 31.1	17.10	2.69	0.549 ± 0.005
15D10318	4.3 % ✓	0.5400611	270.4737	1.291112	351.4663	48.92210	444.9 ± 14.3	23.42	9.26	0.559 ± 0.004
15D10319	4.6 % ✓	0.4875543	202.2033	0.794639	278.1208	36.76014	422.5 ± 16.1	20.30	7.33	0.591 ± 0.004
15D10320	4.9 % ✓	0.5232404	190.9134	0.699217	279.4695	36.87887	421.8 ± 18.0	19.23	7.36	0.629 ± 0.005
15D10322	5.2 % ✓	0.5253049	165.8290	0.625453	253.7296	35.43125	446.3 ± 18.4	18.56	6.68	0.658 ± 0.005
15D10323	5.5 % ✓	0.4403449	117.8970	0.392737	185.7533	25.10437	432.0 ± 23.0	16.15	4.89	0.677 ± 0.005
15D10324	5.8 % ✓	0.2391383	48.3268	0.171560	78.3854	11.10855	453.0 ± 37.9	13.57	2.06	0.697 ± 0.009
15D10326	6.1 %	0.2246446	39.7234	0.136758	65.2746	8.00304	391.9 ± 43.2	10.75	1.72	0.707 ± 0.010
15D10327	6.5 %	0.3715521	83.9674	0.357107	139.4599	17.55588	402.4 ± 27.8	13.77	3.67	0.714 ± 0.007
15D10328	7.0 %	0.3597191	79.4712	0.326252	131.5059	16.71586	406.3 ± 28.0	13.57	3.46	0.712 ± 0.007
15D10330	7.6 %	0.3412333	64.3452	0.305361	109.9571	15.88744	461.8 ± 34.3	13.60	2.90	0.735 ± 0.008
15D10331	8.4 %	0.3708974	78.5899	0.436176	133.9259	17.44564	416.4 ± 28.3	13.72	3.53	0.733 ± 0.007
15D10332	9.4 %	0.4064183	90.9726	0.525094	150.9075	19.32143	409.2 ± 27.8	13.84	3.97	0.713 ± 0.006
15D10334	10.5 %	0.3067070	63.6017	0.371280	95.3993	11.34981	380.3 ± 36.7	11.12	2.51	0.645 ± 0.007
15D10335	11.7 %	0.2208387	64.4052	0.363373	77.7280	7.76624	319.4 ± 37.9	10.62	2.05	0.519 ± 0.005
15D10336	13.1 %	0.1541483	51.4564	0.210574	47.4307	4.80643	323.9 ± 54.0	9.54	1.25	0.396 ± 0.005
15D10338	14.7 %	0.1142782	58.8142	0.175045	34.0720	4.12973	387.4 ± 69.9	10.89	0.90	0.249 ± 0.003
15D10339	16.5 %	0.0836439	48.4893	0.069346	16.3845	1.75947	343.2 ± 135.0	6.64	0.43	0.145 ± 0.002
15D10340	18.5 %	0.0946614	117.5900	0.145858	19.4131	2.40554	396.1 ± 128.0	7.91	0.51	0.071 ± 0.001
15D10342	19.8 %	0.0696605	85.8516	0.165421	11.3967	1.66713	467.5 ± 184.4	7.49	0.30	0.057 ± 0.001
15D10343	21.7 %	0.0582320	75.0130	0.074695	9.1101	1.23154	432.1 ± 224.4	6.68	0.24	0.052 ± 0.001
15D10344	22.8 %	0.0523333	58.8462	0.046280	7.6558	0.96068	401.1 ± 265.8	5.85	0.20	0.056 ± 0.001
15D10346	24.3 %	0.0478003	54.2631	0.110440	7.8280	1.11106	453.7 ± 251.9	7.29	0.21	0.062 ± 0.001
Σ		9.7976917	2847.7621	29.649979	3796.5446	530.37944				

Information on Analysis	Results	40(r)/39(k) ± 2σ	Age ± 2σ (ka)	MSWD	39Ar(k) (%,n)	K/Ca ± 2σ
Sample = 1180043-1A Material = Groundmass Location = Kerguelen Plateau Analyst = Dan Miggins Project = KERGUELEN   FALLOON (14-I Mass Discrimination Law = LIN Irradiation = 14-OSU-07 (7B24-14) J = 0.00176774 ± 0.00000203 FCT-NM = 28.201 ± 0.023 Ma	Age Plateau	0.13633 ± 0.00294 ± 2.16%	435.8 ± 9.4 ± 2.17% Full External Error ± 13.6 Analytical Error ± 9.4	1.62 14% 2.15 1.2733	40.28 7 2σ Confidence Limit Error Magnification	0.609 ± 0.040
	Total Fusion Age	0.13970 ± 0.00170 ± 1.22%	446.5 ± 5.5 ± 1.24% Full External Error ± 11.5 Analytical Error ± 5.4		31	0.573 ± 0.001



Normal Isochron		39(k)/36(a) ± 2σ		40(a+r)/36(a) ± 2σ	r.i.
15D10306	2.0 %	271.57 ± 2.33		338.10 ± 2.87	0.9832
15D10308	2.2 %	291.31 ± 2.58		341.97 ± 3.00	0.9837
15D10309	2.4 %	285.10 ± 3.53		343.89 ± 4.24	0.9843
15D10310	2.6 %	349.33 ± 3.28		351.28 ± 3.27	0.9854
15D10312	2.8 %	395.06 ± 3.87		352.65 ± 3.43	0.9855
15D10313	3.0 %	393.39 ± 5.01		359.79 ± 4.57	0.9870
15D10314	3.3 %	464.49 ± 5.08		367.05 ± 4.00	0.9865
15D10315	3.6 %	398.92 ± 6.41		356.85 ± 5.75	0.9847
15D10317	3.9 % ✓	434.53 ± 6.19		356.54 ± 5.08	0.9868
15D10318	4.3 % ✓	650.79 ± 6.46		386.09 ± 3.80	0.9884
15D10319	4.6 % ✓	570.44 ± 5.57		370.90 ± 3.60	0.9869
15D10320	4.9 % ✓	534.11 ± 5.47		365.98 ± 3.73	0.9883
15D10322	5.2 % ✓	483.01 ± 4.56		362.95 ± 3.40	0.9858
15D10323	5.5 % ✓	421.84 ± 4.35		352.51 ± 3.61	0.9863
15D10324	5.8 % ✓	327.78 ± 4.30		341.95 ± 4.49	0.9823
15D10326	6.1 %	290.57 ± 3.85		331.13 ± 4.39	0.9791
15D10327	6.5 %	375.34 ± 4.15		342.75 ± 3.78	0.9851
15D10328	7.0 %	365.58 ± 3.96		341.97 ± 3.69	0.9845
15D10330	7.6 %	322.23 ± 3.77		342.06 ± 3.99	0.9850
15D10331	8.4 %	361.09 ± 3.92		342.54 ± 3.70	0.9846
15D10332	9.4 %	371.31 ± 4.07		343.04 ± 3.74	0.9864
15D10334	10.5 %	311.04 ± 3.76		332.51 ± 4.02	0.9836
15D10335	11.7 %	351.97 ± 4.95		330.67 ± 4.66	0.9816
15D10336	13.1 %	307.70 ± 5.37		326.68 ± 5.73	0.9774
15D10338	14.7 %	298.15 ± 6.52		331.64 ± 7.29	0.9768
15D10339	16.5 %	195.88 ± 5.48		316.54 ± 8.84	0.9623
15D10340	18.5 %	205.08 ± 5.69		320.91 ± 8.89	0.9716
15D10342	19.8 %	163.60 ± 5.28		319.43 ± 10.17	0.9503
15D10343	21.7 %	156.44 ± 5.88		316.65 ± 11.73	0.9464
15D10344	22.8 %	146.29 ± 6.12		313.86 ± 12.89	0.9391
15D10346	24.3 %	163.77 ± 7.20		318.74 ± 13.87	0.9453

Results	40(a)/36(a) ± 2σ		40(r)/39(k) ± 2σ	Age ± 2σ (ka)	MSWD
Normal Isochron	297.75 ± 8.95 ± 3.01%		0.13197 ± 0.01739 ± 13.18%	421.8 ± 55.6 ± 13.18%	1.86
			Full External Error ± 56.4		
			Analytical Error ± 55.6		
Statistics	2σ Confidence Limit	2.26	Convergence	0.000000352477	
	Error Magnification	1.3626	Number of Iterations	6	
	Number of Data Points	7	Calculated Line	Weighted York-2	



Inverse Isochron		39(k)/40(a+r) ± 2σ		36(a)/40(a+r) ± 2σ	r.i.
15D10306	2.0 %	0.8032062 ± 0.0012575		0.00295768 ± 0.00002507	0.0336
15D10308	2.2 %	0.8518404 ± 0.0013565		0.00292420 ± 0.00002566	0.0364
15D10309	2.4 %	0.8290287 ± 0.0018141		0.00290788 ± 0.00003585	0.0694
15D10310	2.6 %	0.9944525 ± 0.0015903		0.00284674 ± 0.00002651	0.0395
15D10312	2.8 %	1.1202494 ± 0.0018634		0.00283566 ± 0.00002761	0.0481
15D10313	3.0 %	1.0933722 ± 0.0022457		0.00277939 ± 0.00003531	0.0691
15D10314	3.3 %	1.2654498 ± 0.0022712		0.00272440 ± 0.00002972	0.0602
15D10315	3.6 %	1.1178760 ± 0.0031466		0.00280226 ± 0.00004519	0.1034
15D10317	3.9 %	✓	1.2187499 ± 0.0028246	0.00280476 ± 0.00003996	0.0873
15D10318	4.3 %	✓	1.6856073 ± 0.0025423	0.00259009 ± 0.00002552	0.0333
15D10319	4.6 %	✓	1.5380029 ± 0.0024268	0.00269617 ± 0.00002617	0.0439
15D10320	4.9 %	✓	1.4593980 ± 0.0022868	0.00273238 ± 0.00002783	0.0379
15D10322	5.2 %	✓	1.3308043 ± 0.0021101	0.00275521 ± 0.00002585	0.0431
15D10323	5.5 %	✓	1.1966615 ± 0.0020395	0.00283679 ± 0.00002907	0.0522
15D10324	5.8 %	✓	0.9585626 ± 0.0023696	0.00292438 ± 0.00003837	0.0928
15D10326	6.1 %	0.8775178 ± 0.0023799		0.00302000 ± 0.00004003	0.1041
15D10327	6.5 %	1.0950955 ± 0.0020876		0.00291758 ± 0.00003217	0.0677
15D10328	7.0 %	1.0690419 ± 0.0020364		0.00292424 ± 0.00003159	0.0669
15D10330	7.6 %	0.9420436 ± 0.0019069		0.00292347 ± 0.00003411	0.0709
15D10331	8.4 %	1.0541539 ± 0.0020032		0.00291940 ± 0.00003156	0.0673
15D10332	9.4 %	1.0824097 ± 0.0019538		0.00291511 ± 0.00003180	0.0558
15D10334	10.5 %	0.9354551 ± 0.0020475		0.00300747 ± 0.00003632	0.0798
15D10335	11.7 %	1.0644158 ± 0.0028753		0.00302419 ± 0.00004259	0.1075
15D10336	13.1 %	0.9418846 ± 0.0034992		0.00306109 ± 0.00005365	0.1265
15D10338	14.7 %	0.8990217 ± 0.0042445		0.00301534 ± 0.00006629	0.1298
15D10339	16.5 %	0.6188397 ± 0.0047459		0.00315921 ± 0.00008819	0.1298
15D10340	18.5 %	0.6390501 ± 0.0042192		0.00311612 ± 0.00008636	0.1177
15D10342	19.8 %	0.5121687 ± 0.0051771		0.00313055 ± 0.00009969	0.1176
15D10343	21.7 %	0.4940617 ± 0.0060414		0.00315807 ± 0.00011702	0.1235
15D10344	22.8 %	0.4661023 ± 0.0067485		0.00318616 ± 0.00013081	0.1234
15D10346	24.3 %	0.5137839 ± 0.0074367		0.00313732 ± 0.00013653	0.1345

Results	40(a)/36(a) ± 2σ		40(r)/39(k) ± 2σ	Age ± 2σ (ka)	MSWD
Inverse Isochron	297.69 ± 8.92 ± 3.00%		0.13216 ± 0.01706 ± 12.91%	422.4 ± 54.5 ± 12.91%	1.85
	Full External Error ± 55.4				10%
	Analytical Error ± 54.5				
Statistics	2σ Confidence Limit	2.26	Convergence	0.0202709352	
	Error Magnification	1.3619	Number of Iterations	2	
	Number of Data Points	7	Calculated Line	Weighted York-2	
	Spreading Factor	9.6%			



OSU Argon Geochronology Lab																
Relative Abundances		36Ar [fA]	%1σ	37Ar [fA]	%1σ	38Ar [fA]	%1σ	39Ar [fA]	%1σ	40Ar [fA]	%1σ	40(r)/39(k) ± 2σ	Age ± 2σ (ka)	40Ar(r) (%)	39Ar(k) (%)	K/Ca ± 2σ
15D10306	2.0 %	0.715182	0.412	65.1926	0.533	7.831840	0.531	189.3633	0.071	235.8958	0.033	0.15688 ± 0.00924	501.4 ± 29.5	12.59	4.99	1.249 ± 0.013
15D10308	2.2 %	0.647643	0.424	72.3728	0.489	6.868740	0.594	182.9418	0.071	214.8881	0.036	0.15954 ± 0.00891	509.9 ± 28.5	13.58	4.82	1.087 ± 0.011
15D10309	2.4 %	0.317742	0.593	35.6235	0.786	3.225378	1.208	87.8371	0.085	106.0116	0.068	0.16974 ± 0.01281	542.5 ± 40.9	14.06	2.31	1.060 ± 0.017
15D10310	2.6 %	0.581566	0.442	102.1165	0.420	5.801896	0.691	193.6260	0.070	194.8325	0.038	0.15967 ± 0.00789	510.3 ± 25.2	15.86	5.10	0.815 ± 0.007
15D10312	2.8 %	0.517773	0.455	118.6183	0.393	4.759556	0.817	192.1110	0.070	171.6122	0.044	0.14467 ± 0.00730	462.4 ± 23.3	16.19	5.06	0.696 ± 0.006
15D10313	3.0 %	0.325240	0.590	79.7355	0.469	2.681904	1.448	119.6427	0.078	109.4972	0.067	0.16343 ± 0.00957	522.3 ± 30.6	17.85	3.15	0.645 ± 0.006
15D10314	3.3 %	0.402758	0.496	127.7322	0.389	3.225743	1.244	171.4147	0.071	135.5626	0.054	0.15405 ± 0.00696	492.4 ± 22.2	19.47	4.51	0.577 ± 0.005
15D10315	3.6 %	0.198514	0.739	55.1477	0.571	1.357771	2.848	73.3912	0.090	65.6933	0.108	0.15380 ± 0.01200	491.6 ± 38.3	17.17	1.93	0.572 ± 0.007
15D10317	3.9 %	✓0.256641	0.648	80.1794	0.462	1.749850	2.292	102.3387	0.079	84.0293	0.085	0.14047 ± 0.00972	449.0 ± 31.1	17.10	2.69	0.549 ± 0.005
15D10318	4.3 %	✓0.611660	0.432	270.4737	0.342	5.395495	0.761	351.6483	0.067	208.8652	0.035	0.13919 ± 0.00449	444.9 ± 14.3	23.42	9.26	0.559 ± 0.004
15D10319	4.6 %	✓0.541056	0.434	202.2033	0.353	4.053588	0.971	278.2569	0.067	181.1133	0.041	0.13217 ± 0.00504	422.5 ± 16.1	20.30	7.33	0.591 ± 0.004
15D10320	4.9 %	✓0.573747	0.462	190.9134	0.356	3.980026	1.020	279.5980	0.068	191.7787	0.039	0.13196 ± 0.00565	421.8 ± 18.0	19.23	7.36	0.629 ± 0.005
15D10322	5.2 %	✓0.569178	0.430	165.8290	0.365	3.613380	1.077	253.8412	0.068	190.9151	0.040	0.13964 ± 0.00575	446.3 ± 18.4	18.56	6.68	0.658 ± 0.005
15D10323	5.5 %	✓0.471529	0.476	117.8970	0.394	2.590549	1.498	185.8327	0.071	155.4139	0.048	0.13515 ± 0.00720	432.0 ± 23.0	16.15	4.89	0.677 ± 0.005
15D10324	5.8 %	✓0.251922	0.616	48.3268	0.633	1.108953	3.370	78.4180	0.088	81.8531	0.087	0.14172 ± 0.01187	453.0 ± 37.9	13.57	2.06	0.697 ± 0.009
15D10326	6.1 %	0.235152	0.625	39.7234	0.729	0.922121	4.270	65.3013	0.095	74.4514	0.097	0.12261 ± 0.01352	391.9 ± 43.2	10.75	1.72	0.707 ± 0.010
15D10327	6.5 %	0.393773	0.516	83.9674	0.452	2.014771	1.949	139.5164	0.074	127.4904	0.060	0.12588 ± 0.00870	402.4 ± 27.8	13.77	3.67	0.714 ± 0.007
15D10328	7.0 %	0.380749	0.507	79.4712	0.455	1.891126	2.081	131.5594	0.075	123.1457	0.059	0.12711 ± 0.00875	406.3 ± 28.0	13.57	3.46	0.712 ± 0.007
15D10330	7.6 %	0.358266	0.552	64.3452	0.516	1.621343	2.403	110.0004	0.078	116.8329	0.065	0.14449 ± 0.01072	461.8 ± 34.3	13.60	2.90	0.735 ± 0.008
15D10331	8.4 %	0.391711	0.508	78.5899	0.468	2.030665	1.928	133.9788	0.075	127.1811	0.059	0.13026 ± 0.00887	416.4 ± 28.3	13.72	3.53	0.733 ± 0.007
15D10332	9.4 %	0.430514	0.512	90.9726	0.438	2.319644	1.744	150.9687	0.073	139.5705	0.052	0.12803 ± 0.00870	409.2 ± 27.8	13.84	3.97	0.713 ± 0.006
15D10334	10.5 %	0.323554	0.568	63.6017	0.538	1.515131	2.537	95.4421	0.082	102.0781	0.073	0.11897 ± 0.01150	380.3 ± 36.7	11.12	2.51	0.645 ± 0.007
15D10335	11.7 %	0.237896	0.646	64.4052	0.507	1.290087	3.062	77.7713	0.089	73.1026	0.101	0.09992 ± 0.01186	319.4 ± 37.9	10.62	2.05	0.519 ± 0.005
15D10336	13.1 %	0.167764	0.793	51.4564	0.604	0.779861	5.061	47.4653	0.118	50.4051	0.143	0.10134 ± 0.01688	323.9 ± 54.0	9.54	1.25	0.396 ± 0.005
15D10338	14.7 %	0.129832	0.952	58.8142	0.539	0.584960	6.550	34.1115	0.148	37.9333	0.183	0.12121 ± 0.02187	387.4 ± 69.9	10.89	0.90	0.249 ± 0.003
15D10339	16.5 %	0.096456	1.185	48.4893	0.657	0.272109	15.271	16.4172	0.278	26.4928	0.263	0.10739 ± 0.04222	343.2 ± 135.0	6.64	0.43	0.145 ± 0.002
15D10340	18.5 %	0.125727	1.024	117.5900	0.400	0.386105	10.667	19.4922	0.234	30.3976	0.232	0.12391 ± 0.04004	396.1 ± 128.0	7.91	0.51	0.071 ± 0.001
15D10342	19.8 %	0.092350	1.173	85.8516	0.455	0.309328	12.858	11.4545	0.399	22.2633	0.307	0.14628 ± 0.05771	467.5 ± 184.4	7.49	0.30	0.057 ± 0.001
15D10343	21.7 %	0.078047	1.348	75.0130	0.477	0.190294	20.350	9.1605	0.481	18.4483	0.374	0.13518 ± 0.07021	432.1 ± 224.4	6.68	0.24	0.052 ± 0.001
15D10344	22.8 %	0.067876	1.542	58.8462	0.564	0.144002	27.676	7.6954	0.581	16.4329	0.428	0.12548 ± 0.08317	401.1 ± 265.8	5.85	0.20	0.056 ± 0.001
15D10346	24.3 %	0.062142	1.630	54.2631	0.578	0.209211	18.027	7.8646	0.556	15.2440	0.460	0.14193 ± 0.07882	453.7 ± 251.9	7.29	0.21	0.062 ± 0.001
Σ		10.553960	0.102	2847.7621	0.085	74.725428	0.295	3798.4611	0.016	3429.4318	0.012					

Information on Analysis and Constants Used in Calculations		Results					
		40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (ka)	MSWD	39Ar(k) (% <sub>n</sub> )	K/Ca ± 2σ
Sample = 1180043-1A	Age Equations = Min et al. (2000)						
Material = Groundmass	Negative Intensities = Allowed		0.13633 ± 0.00294 ± 2.16%	435.8 ± 9.4 ± 2.17%	1.62 14%	40.28 7	0.609 ± 0.040
Location = Kerguelen Plateau	Decay Constant 40K = 5.530 ± 0.048 E-10 1/a			Full External Error ± 13.6	2.15	2σ Confidence Limit	
Analyst = Dan Miggins	Decay Constant 39Ar = 2.940 ± 0.016 E-07 1/h			Analytical Error ± 9.4	1.2733	Error Magnification	
Project = KERGUELEN   FALLOON (14-PIL-01)	Decay Constant 37Ar = 8.230 ± 0.012 E-04 1/h						
Mass Discrimination Law = LIN	Decay Constant 36Cl = 2.257 ± 0.015 E-06 1/a						
Irradiation = 14-OSU-07 (7B24-14)	Decay Constant 40K(EC,β <sup>+</sup> ) = 0.580 ± 0.009 E-10 1/a		0.13970 ± 0.00170 ± 1.22%	446.5 ± 5.5 ± 1.24%		31	0.573 ± 0.001
J = 0.00176774 ± 0.00000203	Decay Constant 40K(β <sup>-</sup> ) = 4.950 ± 0.043 E-10 1/a			Full External Error ± 11.5			
FCT-NM = 28.201 ± 0.023 Ma	Atmospheric Ratio 40/36(a) = 295.50			Analytical Error ± 5.4			
IGSN = Undefined	Atmospheric Ratio 38/36(a) = 0.1869						
Preferred Age = Undefined	Production Ratio 39/37(ca) = 0.000673	297.75 ± 8.95 ± 3.01%	0.13197 ± 0.01739 ± 13.18%	421.8 ± 55.6 ± 13.18%	1.86 10%	40.28 7	
Classification = Undefined	Production Ratio 38/37(ca) = 0.000014			Full External Error ± 56.4	2.26	2σ Confidence Limit	
Experiment Type = Incremental Heating	Production Ratio 36/37(ca) = 0.000264			Analytical Error ± 55.6	1.3626	Error Magnification	
Extraction Method = Undefined	Production Ratio 40/39(k) = 0.001010				6	Number of Iterations	
Heating = 77 sec	Production Ratio 38/39(k) = 0.011380				0.0000003525	Convergence	
Isolation = 6.00 min	Production Ratio 36/38(cl) = 262.80 ± 1.71						
Instrument = ARGUS-VI-D	Scaling Ratio K/Ca = 0.430						
Lithology = Undefined	Abundance Ratio 40K/K = 1.1700 ± 0.0100 E-04	297.69 ± 8.92 ± 3.00%	0.13216 ± 0.01706 ± 12.91%	422.4 ± 54.5 ± 12.91%	1.85 10%	40.28 7	
Lat-Lon = Undefined - Undefined	Atomic Weight K = 39.0983 ± 0.0001 g			Full External Error ± 55.4	2.26	2σ Confidence Limit	
Collector Calibrations = 40Ar 36Ar							

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ArArCALC v2.6.2 -- Beta Version



OSU Argon Geochronology Lab																																	
Degassing Patterns		36Ar(a) [fA]		36Ar(c) [fA]		36Ar(ca) [fA]		36Ar(cl) [fA]		37Ar(ca) [fA]		38Ar(a) [fA]		38Ar(c) [fA]		38Ar(k) [fA]		38Ar(ca) [fA]		38Ar(cl) [fA]		39Ar(k) [fA]		39Ar(ca) [fA]		40Ar(r) [fA]		40Ar(a) [fA]		40Ar(c) [fA]		40Ar(k) [fA]	
		%1σ		%1σ		%1σ		%1σ		%1σ		%1σ		%1σ		%1σ		%1σ		%1σ		%1σ		%1σ		%1σ		%1σ		%1σ		%1σ	
15D10306	2.0 %	0.6971382	0.42	0.0000000	0.00	0.0172109	0.53	0.0008335	1.19	65.1926	0.53	0.1302951	0.42	0.0000000	0.00	2.154455	0.07	0.0009062	0.53	5.546184	1.50	189.3194	0.07	0.0438746	0.53	29.70029	2.94	206.0043	0.42	0.0000000	0.00	0.1912126	0.07
15D10308	2.2 %	0.6278347	0.44	0.0000000	0.00	0.0191064	0.49	0.0007018	1.27	72.3728	0.49	0.1173423	0.44	0.0000000	0.00	2.081323	0.07	0.0010060	0.49	4.669068	1.57	182.8930	0.07	0.0487069	0.49	29.17826	2.79	185.5252	0.44	0.0000000	0.00	0.1847220	0.07
15D10309	2.4 %	0.3080111	0.61	0.0000000	0.00	0.0094046	0.79	0.0003259	2.02	35.6235	0.79	0.0575673	0.61	0.0000000	0.00	0.999314	0.09	0.0004952	0.79	2.168002	2.22	87.8131	0.09	0.0239746	0.79	14.90563	3.77	91.0173	0.61	0.0000000	0.00	0.0886913	0.09
15D10310	2.6 %	0.5540815	0.46	0.0000000	0.00	0.0269588	0.42	0.0005253	1.47	102.1165	0.42	0.1035578	0.46	0.0000000	0.00	2.202682	0.07	0.0014194	0.42	3.494237	1.74	193.5573	0.07	0.0687244	0.42	30.90593	2.47	163.7311	0.46	0.0000000	0.00	0.1954928	0.07
15D10312	2.8 %	0.4860847	0.48	0.0000000	0.00	0.0313152	0.39	0.0003732	1.82	118.6183	0.39	0.0908492	0.48	0.0000000	0.00	2.185315	0.07	0.0016488	0.39	2.481743	2.04	192.0312	0.07	0.0798301	0.39	27.78024	2.52	143.6380	0.48	0.0000000	0.00	0.1939515	0.07
15D10313	3.0 %	0.3039998	0.63	0.0000000	0.00	0.0210502	0.47	0.0001900	3.21	79.7355	0.47	0.0568176	0.63	0.0000000	0.00	1.360924	0.08	0.0011083	0.47	1.263055	3.34	119.5891	0.08	0.0536620	0.47	19.54442	2.93	89.8320	0.63	0.0000000	0.00	0.1207850	0.08
15D10314	3.3 %	0.3688552	0.54	0.0000000	0.00	0.0337213	0.39	0.0001813	3.46	127.7322	0.39	0.0689390	0.54	0.0000000	0.00	1.949721	0.07	0.0017755	0.39	1.205307	3.58	171.3287	0.07	0.0859638	0.39	26.39288	2.26	108.9967	0.54	0.0000000	0.00	0.1730420	0.07
15D10315	3.6 %	0.1838821	0.80	0.0000000	0.00	0.0145590	0.57	0.0000734	7.98	55.1477	0.57	0.0343676	0.80	0.0000000	0.00	0.834770	0.09	0.0007666	0.57	0.487867	8.03	73.3541	0.09	0.0371144	0.57	11.28203	3.90	54.3372	0.80	0.0000000	0.00	0.0740877	0.09
15D10317	3.9 %	✓ 0.2353922	0.71	0.0000000	0.00	0.0211674	0.46	0.0000814	7.48	80.1794	0.46	0.0439948	0.71	0.0000000	0.00	1.164000	0.08	0.0011145	0.46	0.540741	7.53	102.2847	0.08	0.0539607	0.46	14.36756	3.46	69.5584	0.71	0.0000000	0.00	0.1033076	0.08
15D10318	4.3 %	✓ 0.5400611	0.49	0.0000000	0.00	0.0714051	0.34	0.0001943	3.32	270.4737	0.34	0.1009374	0.49	0.0000000	0.00	3.999686	0.07	0.0037596	0.34	1.291112	3.44	351.4663	0.07	0.1820288	0.34	48.92210	1.61	159.5881	0.49	0.0000000	0.00	0.3549809	0.07
15D10319	4.6 %	✓ 0.4875543	0.48	0.0000000	0.00	0.0533817	0.35	0.0001196	5.05	202.2033	0.35	0.0911239	0.48	0.0000000	0.00	3.165015	0.07	0.0028106	0.35	0.794639	5.13	278.1208	0.07	0.1360828	0.35	36.76014	1.91	144.0723	0.48	0.0000000	0.00	0.2809020	0.07
15D10320	4.9 %	✓ 0.5232404	0.51	0.0000000	0.00	0.0504011	0.36	0.0001052	5.89	190.9134	0.36	0.0977936	0.51	0.0000000	0.00	3.180363	0.07	0.0026537	0.36	0.699217	5.96	279.4695	0.07	0.1284847	0.36	36.87887	2.14	154.6175	0.51	0.0000000	0.00	0.2822642	0.07
15D10322	5.2 %	✓ 0.5253049	0.47	0.0000000	0.00	0.0437789	0.37	0.0000941	6.30	165.8290	0.37	0.0981795	0.47	0.0000000	0.00	2.887443	0.07	0.0023050	0.37	0.625453	6.37	253.7296	0.07	0.1116029	0.37	35.43125	2.06	155.2276	0.47	0.0000000	0.00	0.2562669	0.07
15D10323	5.5 %	✓ 0.4403449	0.51	0.0000000	0.00	0.0311248	0.39	0.0000591	9.93	117.8970	0.39	0.0823005	0.51	0.0000000	0.00	2.113873	0.07	0.0016388	0.39	0.392737	9.97	185.7533	0.07	0.0793447	0.39	25.10437	2.66	130.1219	0.51	0.0000000	0.00	0.1876108	0.07
15D10324	5.8 %	✓ 0.2391383	0.65	0.0000000	0.00	0.0127583	0.63	0.0000258	21.81	48.3268	0.63	0.0446950	0.65	0.0000000	0.00	0.892026	0.09	0.0006717	0.63	0.171560	21.83	78.3854	0.09	0.0325239	0.63	11.10855	4.19	70.6654	0.65	0.0000000	0.00	0.0791693	0.09
15D10326	6.1 %	0.2246446	0.66	0.0000000	0.00	0.0104870	0.73	0.0000206	28.81	39.7234	0.73	0.0419861	0.66	0.0000000	0.00	0.742825	0.10	0.0005522	0.73	0.136758	28.83	65.2746	0.10	0.0267338	0.73	8.00304	5.51	66.3825	0.66	0.0000000	0.00	0.0659274	0.10
15D10327	6.5 %	0.3715521	0.55	0.0000000	0.00	0.0221674	0.45	0.0000538	11.04	83.9674	0.45	0.0694431	0.55	0.0000000	0.00	1.587053	0.07	0.0011671	0.45	0.357107	11.08	139.4599	0.07	0.0565100	0.45	17.55588	3.45	109.7936	0.55	0.0000000	0.00	0.1408545	0.07
15D10328	7.0 %	0.3597191	0.54	0.0000000	0.00	0.0209804	0.46	0.0000491	12.10	79.4712	0.46	0.0672315	0.54	0.0000000	0.00	1.496537	0.08	0.0011046	0.46	0.326252	12.14	131.5059	0.08	0.0534841	0.46	16.71586	3.44	106.2970	0.54	0.0000000	0.00	0.1328210	0.08
15D10330	7.6 %	0.3412333	0.58	0.0000000	0.00	0.0169871	0.52	0.0000460	12.80	64.3452	0.52	0.0637765	0.58	0.0000000	0.00	1.251312	0.08	0.0008944	0.52	0.305361	12.83	109.9571	0.08	0.0433043	0.52	15.88744	3.71	100.8344	0.58	0.0000000	0.00	0.1110567	0.08
15D10331	8.4 %	0.3708974	0.54	0.0000000	0.00	0.0207477	0.47	0.0000657	9.03	78.5899	0.47	0.0693207	0.54	0.0000000	0.00	1.524076	0.07	0.0010924	0.47	0.436176	9.07	133.9259	0.07	0.0528910	0.47	17.44564	3.40	109.6002	0.54	0.0000000	0.00	0.1352651	0.07
15D10332	9.4 %	0.4064183	0.54	0.0000000	0.00	0.0240168	0.44	0.0000791	7.76	90.9726	0.44	0.0759596	0.54	0.0000000	0.00	1.717327	0.07	0.0012645	0.44	0.525094	7.82	150.9075	0.07	0.0612246	0.44	19.32143	3.40	120.0966	0.54	0.0000000	0.00	0.1524165	0.07
15D10334	10.5 %	0.3067070	0.60	0.0000000	0.00	0.0167909	0.54	0.0000559	10.40	63.6017	0.54	0.0573235	0.60	0.0000000	0.00	1.085644	0.08	0.0008841	0.54	0.371280	10.44	95.3993	0.08	0.0428040	0.54	11.34981	4.83	90.6319	0.60	0.0000000	0.00	0.0963533	0.08
15D10335	11.7 %	0.2208387	0.70	0.0000000	0.00	0.0170030	0.51	0.0000548	10.91	64.4052	0.51	0.0412748	0.70	0.0000000	0.00	0.884544	0.09	0.0008952	0.51	0.363373	10.95	77.7280	0.09	0.0433447	0.51	7.76624	5.93	65.2578	0.70	0.0000000	0.00	0.0785053	0.09
15D10336	13.1 %	0.1541483	0.86	0.0000000	0.00	0.0135845	0.60	0.0000317	18.77	51.4564	0.60	0.0288103	0.86	0.0000000	0.00	0.539761	0.12	0.0007152	0.60	0.210574	18.79	47.4307	0.12	0.0346301	0.60	4.80643	8.33	45.5508	0.86	0.0000000	0.00	0.0479050	0.12
15D10338	14.7 %	0.1142782	1.08																														



Additional Parameters		40Ar/39Ar	1σ	37Ar/39Ar	1σ	36Ar/39Ar	1σ	Time (days)	37Ar (decay)	39Ar (decay)	40Ar (moles)
15D10306	2.0 %	1.245732	0.000975	0.344273	0.001852	0.003777	0.000016	92.540	6.235904	1.00065406	1.132E-11
15D10308	2.2 %	1.174626	0.000935	0.395606	0.001953	0.003540	0.000015	92.559	6.238214	1.00065419	1.031E-11
15D10309	2.4 %	1.206911	0.001320	0.405563	0.003208	0.003617	0.000022	92.569	6.239412	1.00065426	5.089E-12
15D10310	2.6 %	1.006231	0.000804	0.527390	0.002248	0.003004	0.000013	92.579	6.240696	1.00065433	9.352E-12
15D10312	2.8 %	0.893297	0.000742	0.617447	0.002466	0.002695	0.000012	92.597	6.242922	1.00065446	8.237E-12
15D10313	3.0 %	0.915201	0.000939	0.666447	0.003168	0.002718	0.000016	92.607	6.244121	1.00065453	5.256E-12
15D10314	3.3 %	0.790846	0.000709	0.745165	0.002945	0.002350	0.000012	92.617	6.245320	1.00065460	6.507E-12
15D10315	3.6 %	0.895111	0.001259	0.751421	0.004340	0.002705	0.000020	92.626	6.246519	1.00065467	3.153E-12
15D10317	3.9 %	✓0.821090	0.000951	0.783471	0.003676	0.002508	0.000016	92.644	6.248748	1.00065480	4.033E-12
15D10318	4.3 %	✓0.593960	0.000448	0.769160	0.002680	0.001739	0.000008	92.653	6.249862	1.00065486	1.003E-11
15D10319	4.6 %	✓0.650885	0.000513	0.726678	0.002611	0.001944	0.000009	92.662	6.250976	1.00065492	8.693E-12
15D10320	4.9 %	✓0.685909	0.000537	0.682814	0.002472	0.002052	0.000010	92.671	6.252005	1.00065498	9.205E-12
15D10322	5.2 %	✓0.752104	0.000596	0.653279	0.002428	0.002242	0.000010	92.688	6.254150	1.00065510	9.164E-12
15D10323	5.5 %	✓0.836311	0.000712	0.634425	0.002539	0.002537	0.000012	92.697	6.255265	1.00065517	7.460E-12
15D10324	5.8 %	✓1.043806	0.001289	0.616272	0.003936	0.003213	0.000020	92.706	6.256295	1.00065523	3.929E-12
15D10326	6.1 %	1.140121	0.001545	0.608309	0.004471	0.003601	0.000023	92.723	6.258441	1.00065535	3.574E-12
15D10327	6.5 %	0.913802	0.000870	0.601846	0.002756	0.002822	0.000015	92.731	6.259471	1.00065541	6.120E-12
15D10328	7.0 %	0.936046	0.000891	0.604071	0.002788	0.002894	0.000015	92.740	6.260587	1.00065547	5.911E-12
15D10330	7.6 %	1.062114	0.001074	0.584954	0.003050	0.003257	0.000018	92.758	6.262734	1.00065559	5.608E-12
15D10331	8.4 %	0.949263	0.000901	0.586585	0.002780	0.002924	0.000015	92.766	6.263765	1.00065565	6.105E-12
15D10332	9.4 %	0.924499	0.000834	0.602593	0.002675	0.002852	0.000015	92.775	6.264882	1.00065572	6.699E-12
15D10334	10.5 %	1.069529	0.001170	0.666390	0.003626	0.003390	0.000019	92.792	6.267031	1.00065584	4.900E-12
15D10335	11.7 %	0.939968	0.001269	0.828135	0.004264	0.003059	0.000020	92.801	6.268063	1.00065590	3.509E-12
15D10336	13.1 %	1.061936	0.001971	1.084083	0.006666	0.003534	0.000028	92.810	6.269180	1.00065596	2.419E-12
15D10338	14.7 %	1.112038	0.002622	1.724174	0.009642	0.003806	0.000037	92.827	6.271331	1.00065609	1.821E-12
15D10339	16.5 %	1.613723	0.006180	2.953571	0.021066	0.005875	0.000072	92.835	6.272363	1.00065614	1.272E-12
15D10340	18.5 %	1.559475	0.005136	6.032672	0.027961	0.006450	0.000068	92.844	6.273481	1.00065621	1.459E-12
15D10342	19.8 %	1.943638	0.009790	7.495038	0.045343	0.008062	0.000100	92.863	6.275719	1.00065634	1.069E-12
15D10343	21.7 %	2.013889	0.012268	8.188713	0.055496	0.008520	0.000122	92.872	6.276838	1.00065640	8.855E-13
15D10344	22.8 %	2.135415	0.015404	7.646919	0.061888	0.008820	0.000145	92.881	6.277958	1.00065646	7.888E-13
15D10346	24.3 %	1.938311	0.013986	6.899699	0.055319	0.007902	0.000136	92.898	6.280111	1.00065659	7.317E-13

OSU Argon Geochronology Lab  
CEOAS Oregon State University, Corvallis, USA



Procedure Blanks		36Ar [fA]	1σ	37Ar [fA]	1σ	38Ar [fA]	1σ	39Ar [fA]	1σ	40Ar [fA]	1σ
15D10306	2.0 %	0.0108399	0.0007058	0.0133170	0.0281170	0.0224064	0.0278018	0.0212227	0.0347495	3.1072243	0.0633382
15D10308	2.2 %	0.0107826	0.0007058	0.0127593	0.0281170	0.0213820	0.0278018	0.0252605	0.0347495	3.0721008	0.0633382
15D10309	2.4 %	0.0107529	0.0007058	0.0124089	0.0281170	0.0209479	0.0278018	0.0271870	0.0347495	3.0548656	0.0633382
15D10310	2.6 %	0.0107211	0.0007058	0.0119871	0.0281170	0.0205564	0.0278018	0.0291246	0.0347495	3.0371397	0.0633382
15D10312	2.8 %	0.0106659	0.0007058	0.0111425	0.0281170	0.0200580	0.0278018	0.0321726	0.0347495	3.0082293	0.0633382
15D10313	3.0 %	0.0106362	0.0007058	0.0106280	0.0281170	0.0198844	0.0278018	0.0336509	0.0347495	2.9936153	0.0633382
15D10314	3.3 %	0.0106065	0.0007058	0.0100718	0.0281170	0.0197770	0.0278018	0.0350150	0.0347495	2.9796686	0.0633382
15D10315	3.6 %	0.0105768	0.0007058	0.0094738	0.0281170	0.0197360	0.0278018	0.0362650	0.0347495	2.9663890	0.0633382
15D10317	3.9 %	0.0105216	0.0007058	0.0082523	0.0281170	0.0198356	0.0278018	0.0382837	0.0347495	2.9434972	0.0633382
15D10318	4.3 %	0.0104940	0.0007058	0.0075876	0.0281170	0.0199711	0.0278018	0.0391454	0.0347495	2.9329142	0.0633382
15D10319	4.6 %	0.0104665	0.0007058	0.0068868	0.0281170	0.0201639	0.0278018	0.0399088	0.0347495	2.9229066	0.0633382
15D10320	4.9 %	0.0104410	0.0007058	0.0062080	0.0281170	0.0203925	0.0278018	0.0405261	0.0347495	2.9141794	0.0633382
15D10322	5.2 %	0.0103879	0.0007058	0.0046951	0.0281170	0.0210252	0.0278018	0.0415429	0.0347495	2.8975722	0.0633382
15D10323	5.5 %	0.0103604	0.0007058	0.0038558	0.0281170	0.0214378	0.0278018	0.0419278	0.0347495	2.8897772	0.0633382
15D10324	5.8 %	0.0103349	0.0007058	0.0030491	0.0281170	0.0218693	0.0278018	0.0421957	0.0347495	2.8830925	0.0633382
15D10326	6.1 %	0.0102818	0.0007058	0.0012699	0.0281170	0.0229249	0.0278018	0.0424847	0.0347495	2.8707405	0.0633382
15D10327	6.5 %	0.0102564	0.0007058	0.0003685	0.0281170	0.0235066	0.0278018	0.0424942	0.0347495	2.8655673	0.0633382
15D10328	7.0 %	0.0102288	0.0007058	0.0006425	0.0281170	0.0241918	0.0278018	0.0424098	0.0347495	2.8605161	0.0633382
15D10330	7.6 %	0.0101758	0.0007058	0.0026882	0.0281170	0.0256701	0.0278018	0.0419710	0.0347495	2.8524193	0.0633382
15D10331	8.4 %	0.0101503	0.0007058	0.0037174	0.0281170	0.0264548	0.0278018	0.0416311	0.0347495	2.8492886	0.0633382
15D10332	9.4 %	0.0101227	0.0007058	0.0048671	0.0281170	0.0273598	0.0278018	0.0411683	0.0347495	2.8464502	0.0633382
15D10334	10.5 %	0.0100697	0.0007058	0.0071791	0.0281170	0.0292609	0.0278018	0.0400017	0.0347495	2.8426086	0.0633382
15D10335	11.7 %	0.0100442	0.0007058	0.0083362	0.0281170	0.0302485	0.0278018	0.0393125	0.0347495	2.8415204	0.0633382
15D10336	13.1 %	0.0100166	0.0007058	0.0096244	0.0281170	0.0313734	0.0278018	0.0384712	0.0347495	2.8408946	0.0633382
15D10338	14.7 %	0.0099636	0.0007058	0.0122029	0.0281170	0.0336973	0.0278018	0.0365769	0.0347495	2.8413083	0.0633382
15D10339	16.5 %	0.0099381	0.0007058	0.0134878	0.0281170	0.0348879	0.0278018	0.0355383	0.0347495	2.8422626	0.0633382
15D10340	18.5 %	0.0099105	0.0007058	0.0149145	0.0281170	0.0362326	0.0278018	0.0343186	0.0347495	2.8438496	0.0633382
15D10342	19.8 %	0.0098553	0.0007058	0.0178760	0.0281170	0.0390935	0.0278018	0.0315840	0.0347495	2.8487495	0.0633382
15D10343	21.7 %	0.0098277	0.0007058	0.0194108	0.0281170	0.0406097	0.0278018	0.0300691	0.0347495	2.8520624	0.0633382
15D10344	22.8 %	0.0098002	0.0007058	0.0209815	0.0281170	0.0421831	0.0278018	0.0284558	0.0347495	2.8559506	0.0633382
15D10346	24.3 %	0.0097471	0.0007058	0.0241035	0.0281170	0.0453695	0.0278018	0.0250768	0.0347495	2.8650449	0.0633382



OSU Argon Geochronology Lab																									
Intercept Values	36Ar					37Ar					38Ar					39Ar					40Ar				
	[fA]	1σ	r2			[fA]	1σ	r2			[fA]	1σ	r2			[fA]	1σ	r2			[fA]	1σ	r2		
15D10306	2.0 %	0.6824711	0.0019241	0.8321	EXP 150 of 150	10.2653	0.0327	0.7330	EXP 150 of 150	7.708187	0.028423	0.7323	EXP 150 of 150	188.0397	0.0411	0.9989	EXP 150 of 150	239.69674	0.04604	0.9958	EXP 150 of 150				
15D10308	2.2 %	0.6189871	0.0018211	0.8038	EXP 150 of 150	11.3896	0.0302	0.8105	EXP 150 of 150	6.758561	0.027782	0.6623	EXP 150 of 150	181.6678	0.0409	0.9989	EXP 150 of 150	218.59215	0.04258	0.9951	EXP 150 of 150				
15D10309	2.4 %	0.3091456	0.0013984	0.5491	EXP 150 of 150	5.6113	0.0285	0.5466	EXP 150 of 150	3.162733	0.026254	0.3832	EXP 149 of 150	87.2405	0.0338	0.9965	EXP 150 of 150	109.37822	0.03539	0.9294	EXP 150 of 150				
15D10310	2.6 %	0.5568720	0.0017437	0.7689	EXP 150 of 150	16.0581	0.0316	0.8928	EXP 150 of 150	5.706335	0.027190	0.6180	EXP 150 of 150	192.2799	0.0384	0.9991	EXP 150 of 150	198.44258	0.03916	0.9937	EXP 150 of 150				
15D10312	2.8 %	0.4969090	0.0016060	0.7901	EXP 150 of 150	18.6436	0.0291	0.9294	EXP 150 of 150	4.677969	0.025755	0.5419	EXP 150 of 150	190.7788	0.0400	0.9990	EXP 150 of 150	175.12509	0.04125	0.9888	EXP 150 of 150				
15D10313	3.0 %	0.3160706	0.0014249	0.5249	EXP 150 of 150	12.5330	0.0312	0.8407	EXP 150 of 150	2.627349	0.026152	0.2443	EXP 149 of 150	118.8266	0.0373	0.9977	EXP 150 of 150	112.81277	0.03734	0.9134	EXP 150 of 150				
15D10314	3.3 %	0.3888382	0.0013876	0.6626	EXP 150 of 150	20.0665	0.0311	0.9299	EXP 150 of 150	3.164265	0.027915	0.3354	EXP 150 of 150	170.2323	0.0377	0.9989	EXP 150 of 150	138.94096	0.03733	0.9706	EXP 150 of 150				
15D10315	3.6 %	0.1970027	0.0010640	0.3080	EXP 150 of 150	8.6670	0.0291	0.7344	EXP 150 of 150	1.320483	0.026091	0.0638	EXP 150 of 150	72.9062	0.0291	0.9963	EXP 150 of 150	68.85285	0.03261	0.7951	EXP 150 of 150				
15D10317	3.9 %	0.2515343	0.0012216	0.5078	EXP 150 of 150	12.5910	0.0299	0.8611	EXP 150 of 150	1.707393	0.028100	0.1142	EXP 150 of 150	101.6501	0.0297	0.9981	EXP 150 of 150	87.21985	0.03287	0.3077	EXP 150 of 150				
15D10318	4.3 %	0.5849072	0.0017725	0.7685	EXP 150 of 150	42.4462	0.0305	0.9844	EXP 150 of 150	5.305773	0.028688	0.5492	EXP 150 of 150	349.1898	0.0432	0.9997	EXP 150 of 150	212.41227	0.03648	0.9942	EXP 150 of 150				
15D10319	4.6 %	0.5185742	0.0015491	0.7604	EXP 150 of 150	31.7279	0.0306	0.9718	EXP 150 of 150	3.981021	0.026651	0.4175	EXP 150 of 150	276.3204	0.0377	0.9996	EXP 150 of 150	184.56884	0.03833	0.9896	EXP 150 of 150				
15D10320	4.9 %	0.5492492	0.0018652	0.7497	EXP 149 of 150	29.9512	0.0302	0.9690	EXP 150 of 150	3.908182	0.028393	0.3808	EXP 149 of 150	277.6526	0.0459	0.9994	EXP 150 of 150	195.25680	0.03878	0.9917	EXP 150 of 150				
15D10322	5.2 %	0.5449055	0.0016160	0.7882	EXP 150 of 150	26.0062	0.0311	0.9575	EXP 150 of 150	3.545643	0.026120	0.3896	EXP 150 of 150	252.0797	0.0434	0.9993	EXP 150 of 150	194.37409	0.04227	0.9914	EXP 150 of 150				
15D10323	5.5 %	0.4531752	0.0015623	0.7076	EXP 149 of 150	18.4865	0.0290	0.9267	EXP 149 of 150	2.535622	0.026121	0.2202	EXP 150 of 150	184.5546	0.0383	0.9990	EXP 150 of 150	158.76069	0.03842	0.9846	EXP 150 of 150				
15D10324	5.8 %	0.2469164	0.0010951	0.5628	EXP 150 of 150	7.5780	0.0298	0.6427	EXP 150 of 150	1.072748	0.024199	0.0797	EXP 150 of 150	77.9031	0.0308	0.9962	EXP 150 of 150	84.97689	0.03222	0.1293	EXP 150 of 150				
15D10326	6.1 %	0.2311143	0.0010175	0.5749	EXP 150 of 150	6.2255	0.0292	0.5794	EXP 150 of 150	0.887276	0.027131	0.0280	EXP 150 of 150	64.8800	0.0287	0.9954	EXP 150 of 150	77.54111	0.03441	0.0015	EXP 150 of 150				
15D10327	6.5 %	0.3800506	0.0014501	0.6688	EXP 150 of 150	13.1550	0.0297	0.8572	EXP 150 of 150	1.965218	0.026871	0.1706	EXP 150 of 150	138.5679	0.0367	0.9984	EXP 150 of 150	130.73085	0.04198	0.9658	EXP 150 of 150				
15D10328	7.0 %	0.3677916	0.0013433	0.6761	EXP 150 of 150	12.4474	0.0275	0.8625	EXP 149 of 150	1.842486	0.027013	0.1045	EXP 150 of 150	130.6673	0.0352	0.9983	EXP 150 of 150	126.36832	0.03468	0.9713	EXP 150 of 150				
15D10330	7.6 %	0.3466254	0.0014420	0.6086	EXP 150 of 150	10.0726	0.0286	0.8095	EXP 150 of 150	1.574713	0.026492	0.1400	EXP 150 of 150	109.2610	0.0318	0.9981	EXP 150 of 150	120.02891	0.04130	0.9543	EXP 150 of 150				
15D10331	8.4 %	0.3780078	0.0014002	0.6897	EXP 150 of 150	12.3000	0.0300	0.8347	EXP 150 of 150	1.977959	0.026712	0.1815	EXP 150 of 150	133.0687	0.0350	0.9984	EXP 150 of 150	130.40439	0.03964	0.9694	EXP 150 of 150				
15D10332	9.4 %	0.4144206	0.0015924	0.6623	EXP 150 of 150	14.2350	0.0302	0.8830	EXP 150 of 150	2.262297	0.028508	0.1405	EXP 150 of 150	149.9374	0.0386	0.9985	EXP 150 of 150	142.82735	0.03643	0.9827	EXP 150 of 150				
15D10334	10.5 %	0.3139205	0.0013302	0.6069	EXP 150 of 150	9.9449	0.0318	0.7727	EXP 150 of 150	1.466284	0.025736	0.1150	EXP 150 of 150	94.8041	0.0323	0.9973	EXP 150 of 150	105.22087	0.03857	0.9156	EXP 150 of 150				
15D10335	11.7 %	0.2334538	0.0010959	0.5314	EXP 150 of 150	10.0678	0.0270	0.8108	EXP 149 of 150	1.243161	0.027294	0.1088	EXP 150 of 150	77.2582	0.0327	0.9959	EXP 150 of 150	76.15907	0.03826	0.0124	EXP 150 of 150				
15D10336	13.1 %	0.1675650	0.0009332	0.3765	EXP 150 of 150	8.0392	0.0295	0.7071	EXP 150 of 150	0.738406	0.027275	0.0172	EXP 150 of 150	47.1666	0.0308	0.9900	EXP 150 of 150	53.39426	0.03517	0.8865	EXP 150 of 150				
15D10338	14.7 %	0.1318889	0.0008565	0.1305	EXP 150 of 150	9.1844	0.0275	0.7747	EXP 150 of 150	0.543700	0.025629	0.0055	EXP 150 of 150	33.9058	0.0289	0.9828	EXP 150 of 150	40.88619	0.02918	0.9611	EXP 150 of 150				
15D10339	16.5 %	0.1005199	0.0007687	0.1210	EXP 150 of 150	7.5674	0.0327	0.5729	EXP 150 of 150	0.233703	0.030156	0.0002	EXP 150 of 150	16.3361	0.0271	0.9321	EXP 150 of 150	29.41295	0.02974	0.9758	EXP 150 of 150				
15D10340	18.5 %	0.1279815	0.0009248	0.1452	EXP 150 of 150	18.3661	0.0313	0.9128	EXP 150 of 150	0.344881	0.029655	0.0005	EXP 150 of 150	19.3880	0.0262	0.9544	EXP 150 of 150	33.33085	0.03137	0.9676	EXP 150 of 150				
15D10342	19.8 %	0.0965819	0.0006916	0.0380	EXP 150 of 150	13.3972	0.0315	0.8521	EXP 150 of 150	0.266235	0.027715	0.0383	EXP 150 of 150	11.4047	0.0282	0.8566	EXP 150 of 150	25.17755	0.02644	0.9824	EXP 150 of 150				
15D10343	21.7 %	0.0831218	0.0006608	0.0300	EXP 150 of 150	11.6999	0.0293	0.8378	EXP 150 of 150	0.147224	0.026231	0.0011	EXP 150 of 150	9.1255	0.0259	0.8187	EXP 150 of 150	21.35461	0.02777	0.9835	EXP 150 of 150				
15D10344	22.8 %	0.0735425	0.0006608	0.0042	EXP 150 of 150	9.1709	0.0314	0.7278	EXP 149 of 150	0.099958	0.027832	0.0003	EXP 149 of 150	7.6692	0.0271	0.7245	EXP 150 of 150	19.33717	0.03106	0.9809	EXP 150 of 150				
15D10346	24.3 %	0.0681053	0.0006167	0.0040	EXP 150 of 150	8.4490	0.0288	0.7294	EXP 150 of 150	0.161137	0.024756	0.0049	EXP 150 of 150	7.8338	0.0255	0.7720	EXP 150 of 150	18.15383	0.03055	0.9812	EXP 150 of 150				



OSU Argon Geochronology Lab																																		
Sample Parameters		Sample	Material	Location	Analyst	Temp	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	Irradiation	X-pos	Y-pos	Z/H-pos				
15D10306	2.0 %	1180043-1a	Groundmass	Kerguelen Plateau	Dan Miggins	2	FCT-NM (7B24-14)	28.201	0.082	Kuiper et al (2008)	8.89125	0.115	0.00176774	0.115	303.334	0.117	0.993535076	0.065	1	4.8E-14	3	APR	2015	4	4	1	14-OSU-07	0.00	0.00	33.92				
15D10308	2.2 %	1180043-1a	Groundmass	Kerguelen Plateau	Dan Miggins	2.2	FCT-NM (7B24-14)	28.201	0.082	Kuiper et al (2008)	8.89125	0.115	0.00176774	0.115	303.334	0.117	0.993535076	0.065	1	4.8E-14	3	APR	2015	4	31	1	14-OSU-07	0.00	0.00	33.92				
15D10309	2.4 %	1180043-1a	Groundmass	Kerguelen Plateau	Dan Miggins	2.4	FCT-NM (7B24-14)	28.201	0.082	Kuiper et al (2008)	8.89125	0.115	0.00176774	0.115	303.334	0.117	0.993535076	0.065	1	4.8E-14	3	APR	2015	4	45	1	14-OSU-07	0.00	0.00	33.92				
15D10310	2.6 %	1180043-1a	Groundmass	Kerguelen Plateau	Dan Miggins	2.6	FCT-NM (7B24-14)	28.201	0.082	Kuiper et al (2008)	8.89125	0.115	0.00176774	0.115	303.334	0.117	0.993535076	0.065	1	4.8E-14	3	APR	2015	5	0	1	14-OSU-07	0.00	0.00	33.92				
15D10312	2.8 %	1180043-1a	Groundmass	Kerguelen Plateau	Dan Miggins	2.8	FCT-NM (7B24-14)	28.201	0.082	Kuiper et al (2008)	8.89125	0.115	0.00176774	0.115	303.334	0.117	0.993535076	0.065	1	4.8E-14	3	APR	2015	5	26	1	14-OSU-07	0.00	0.00	33.92				
15D10313	3.0 %	1180043-1a	Groundmass	Kerguelen Plateau	Dan Miggins	3	FCT-NM (7B24-14)	28.201	0.082	Kuiper et al (2008)	8.89125	0.115	0.00176774	0.115	303.334	0.117	0.993535076	0.065	1	4.8E-14	3	APR	2015	5	40	1	14-OSU-07	0.00	0.00	33.92				
15D10314	3.3 %	1180043-1a	Groundmass	Kerguelen Plateau	Dan Miggins	3.3	FCT-NM (7B24-14)	28.201	0.082	Kuiper et al (2008)	8.89125	0.115	0.00176774	0.115	303.334	0.117	0.993535076	0.065	1	4.8E-14	3	APR	2015	5	54	1	14-OSU-07	0.00	0.00	33.92				
15D10315	3.6 %	1180043-1a	Groundmass	Kerguelen Plateau	Dan Miggins	3.6	FCT-NM (7B24-14)	28.201	0.082	Kuiper et al (2008)	8.89125	0.115	0.00176774	0.115	303.334	0.117	0.993535076	0.065	1	4.8E-14	3	APR	2015	6	8	1	14-OSU-07	0.00	0.00	33.92				
15D10317	3.9 %	1180043-1a	Groundmass	Kerguelen Plateau	Dan Miggins	3.9	FCT-NM (7B24-14)	28.201	0.082	Kuiper et al (2008)	8.89125	0.115	0.00176774	0.115	303.334	0.117	0.993535076	0.065	1	4.8E-14	3	APR	2015	6	34	1	14-OSU-07	0.00	0.00	33.92				
15D10318	4.3 %	1180043-1a	Groundmass	Kerguelen Plateau	Dan Miggins	4.3	FCT-NM (7B24-14)	28.201	0.082	Kuiper et al (2008)	8.89125	0.115	0.00176774	0.115	303.334	0.117	0.993535076	0.065	1	4.8E-14	3	APR	2015	6	47	1	14-OSU-07	0.00	0.00	33.92				
15D10319	4.6 %	1180043-1a	Groundmass	Kerguelen Plateau	Dan Miggins	4.6	FCT-NM (7B24-14)	28.201	0.082	Kuiper et al (2008)	8.89125	0.115	0.00176774	0.115	303.334	0.117	0.993535076	0.065	1	4.8E-14	3	APR	2015	7	0	1	14-OSU-07	0.00	0.00	33.92				
15D10320	4.9 %	1180043-1a	Groundmass	Kerguelen Plateau	Dan Miggins	4.9	FCT-NM (7B24-14)	28.201	0.082	Kuiper et al (2008)	8.89125	0.115	0.00176774	0.115	303.334	0.117	0.993535076	0.065	1	4.8E-14	3	APR	2015	7	12	1	14-OSU-07	0.00	0.00	33.92				
15D10322	5.2 %	1180043-1a	Groundmass	Kerguelen Plateau	Dan Miggins	5.2	FCT-NM (7B24-14)	28.201	0.082	Kuiper et al (2008)	8.89125	0.115	0.00176774	0.115	303.334	0.117	0.993535076	0.065	1	4.8E-14	3	APR	2015	7	37	1	14-OSU-07	0.00	0.00	33.92				
15D10323	5.5 %	1180043-1a	Groundmass	Kerguelen Plateau	Dan Miggins	5.5	FCT-NM (7B24-14)	28.201	0.082	Kuiper et al (2008)	8.89125	0.115	0.00176774	0.115	303.334	0.117	0.993535076	0.065	1	4.8E-14	3	APR	2015	7	50	1	14-OSU-07	0.00	0.00	33.92				
15D10324	5.8 %	1180043-1a	Groundmass	Kerguelen Plateau	Dan Miggins	5.8	FCT-NM (7B24-14)	28.201	0.082	Kuiper et al (2008)	8.89125	0.115	0.00176774	0.115	303.334	0.117	0.993535076	0.065	1	4.8E-14	3	APR	2015	8	2	1	14-OSU-07	0.00	0.00	33.92				
15D10326	6.1 %	1180043-1a	Groundmass	Kerguelen Plateau	Dan Miggins	6.1	FCT-NM (7B24-14)	28.201	0.082	Kuiper et al (2008)	8.89125	0.115	0.00176774	0.115	303.334	0.117	0.993535076	0.065	1	4.8E-14	3	APR	2015	8	27	1	14-OSU-07	0.00	0.00	33.92				
15D10327	6.5 %	1180043-1a	Groundmass	Kerguelen Plateau	Dan Miggins	6.5	FCT-NM (7B24-14)	28.201	0.082	Kuiper et al (2008)	8.89125	0.115	0.00176774	0.115	303.334	0.117	0.993535076	0.065	1	4.8E-14	3	APR	2015	8	39	1	14-OSU-07	0.00	0.00	33.92				
15D10328	7.0 %	1180043-1a	Groundmass	Kerguelen Plateau	Dan Miggins	7	FCT-NM (7B24-14)	28.201	0.082	Kuiper et al (2008)	8.89125	0.115	0.00176774	0.115	303.334	0.117	0.993535076	0.065	1	4.8E-14	3	APR	2015	8	52	1	14-OSU-07	0.00	0.00	33.92				
15D10330	7.6 %	1180043-1a	Groundmass	Kerguelen Plateau	Dan Miggins	7.6	FCT-NM (7B24-14)	28.201	0.082	Kuiper et al (2008)	8.89125	0.115	0.00176774	0.115	303.334	0.117	0.993535076	0.065	1	4.8E-14	3	APR	2015	9	17	1	14-OSU-07	0.00	0.00	33.92				
15D10331	8.4 %	1180043-1a	Groundmass	Kerguelen Plateau	Dan Miggins	8.4	FCT-NM (7B24-14)	28.201	0.082	Kuiper et al (2008)	8.89125	0.115	0.00176774	0.115	303.334	0.117	0.993535076	0.065	1	4.8E-14	3	APR	2015	9	29	1	14-OSU-07	0.00	0.00	33.92				
15D10332	9.4 %	1180043-1a	Groundmass	Kerguelen Plateau	Dan Miggins	9.4	FCT-NM (7B24-14)	28.201	0.082	Kuiper et al (2008)	8.89125	0.115	0.00176774	0.115	303.334	0.117	0.993535076	0.065	1	4.8E-14	3	APR	2015	9	42	1	14-OSU-07	0.00	0.00	33.92				
15D10334	10.5 %	1180043-1a	Groundmass	Kerguelen Plateau	Dan Miggins	10.5	FCT-NM (7B24-14)	28.201	0.082	Kuiper et al (2008)	8.89125	0.115	0.00176774	0.115	303.334	0.117	0.993535076	0.065	1	4.8E-14	3	APR	2015	10	7	1	14-OSU-07	0.00	0.00	33.92				
15D10335	11.7 %	1180043-1a	Groundmass	Kerguelen Plateau	Dan Miggins	11.7	FCT-NM (7B24-14)	28.201	0.082	Kuiper et al (2008)	8.89125	0.115	0.00176774	0.115	303.334	0.117	0.993535076	0.065	1	4.8E-14	3	APR	2015	10	19	1	14-OSU-07	0.00	0.00	33.92				
15D10336	13.1 %	1180043-1a	Groundmass	Kerguelen Plateau	Dan Miggins	13.1	FCT-NM (7B24-14)	28.201	0.082	Kuiper et al (2008)	8.89125	0.115	0.00176774	0.115	303.334	0.117	0.993535076	0.065	1	4.8E-14	3	APR	2015	10	32	1	14-OSU-07	0.00	0.00	33.92				
15D10338	14.7 %	1180043-1a	Groundmass	Kerguelen Plateau	Dan Miggins	14.7	FCT-NM (7B24-14)	28.201	0.082	Kuiper et al (2008)	8.89125	0.115	0.00176774	0.115	303.334	0.117	0.993535076	0.065	1	4.8E-14	3	APR	2015	10	57	1	14-OSU-07	0.00	0.00	33.92				
15D10339	16.5 %	1180043-1a	Groundmass	Kerguelen Plateau	Dan Miggins	16.5	FCT-NM (7B24-14)	28.201	0.082	Kuiper et al (2008)	8.89125	0.115	0.00176774	0.115	303.334	0.117	0.993535076	0.065	1	4.8E-14	3	APR	2015	11	9	1	14-OSU-07	0.00	0.00	33.92				
15D10340	18.5 %	1180043-1a	Groundmass	Kerguelen Plateau	Dan Miggins	18.5	FCT-NM (7B24-14)	28.201	0.082	Kuiper et al (2008)	8.89125	0.115	0.00176774	0.115	303.334	0.117	0.993535076	0.065	1	4.8E-14	3	APR	2015	11	22	1	14-OSU-07	0.00	0.00	33.92				
15D10342	19.8 %	1180043-1a	Groundmass	Kerguelen Plateau	Dan Miggins	19.8	FCT-NM (7B24-14)	28.201	0.082	Kuiper et al (2008)	8.89125	0.115	0.00176774	0.115	303.334	0.117	0.993535076	0.065	1	4.8E-14	3	APR	2015	11	48	1	14-OSU-07	0.00	0.00	33.92				
15D10343	21.7 %	1180043-1a	Groundmass	Kerguelen Plateau	Dan Miggins	21.7	FCT-NM (7B24-14)	28.201	0.082	Kuiper et al (2008)	8.89125	0.115	0.00176774	0.115	303.334	0.117	0.993535076	0.065	1	4.8E-14	3	APR	2015	12	1	1	14-OSU-07	0.00	0.00	33.92				
15D10344	22.8 %	1180043-1a	Groundmass	Kerguelen Plateau	Dan Miggins	22.8	FCT-NM (7B24-14)	28.201	0.082	Kuiper et al (2008)	8.89125	0.115	0.00176774	0.115	303.334	0.117	0.993535076	0.065	1	4.8E-14	3	APR	2015	12	14	1	14-OSU-07	0.00	0.00	33.92				
15D10346	24.3 %	1180043-1a	Groundmass	Kerguelen Plateau	Dan Miggins	24.3	FCT-NM (7B24-14)	28.201	0.082	Kuiper et al (2008)	8.89125	0.115	0.00176774	0.115	303.334	0.117	0.993535076	0.065	1	4.8E-14	3	APR	2015	12	39	1	14-OSU-07	0.00	0.00	33.92				



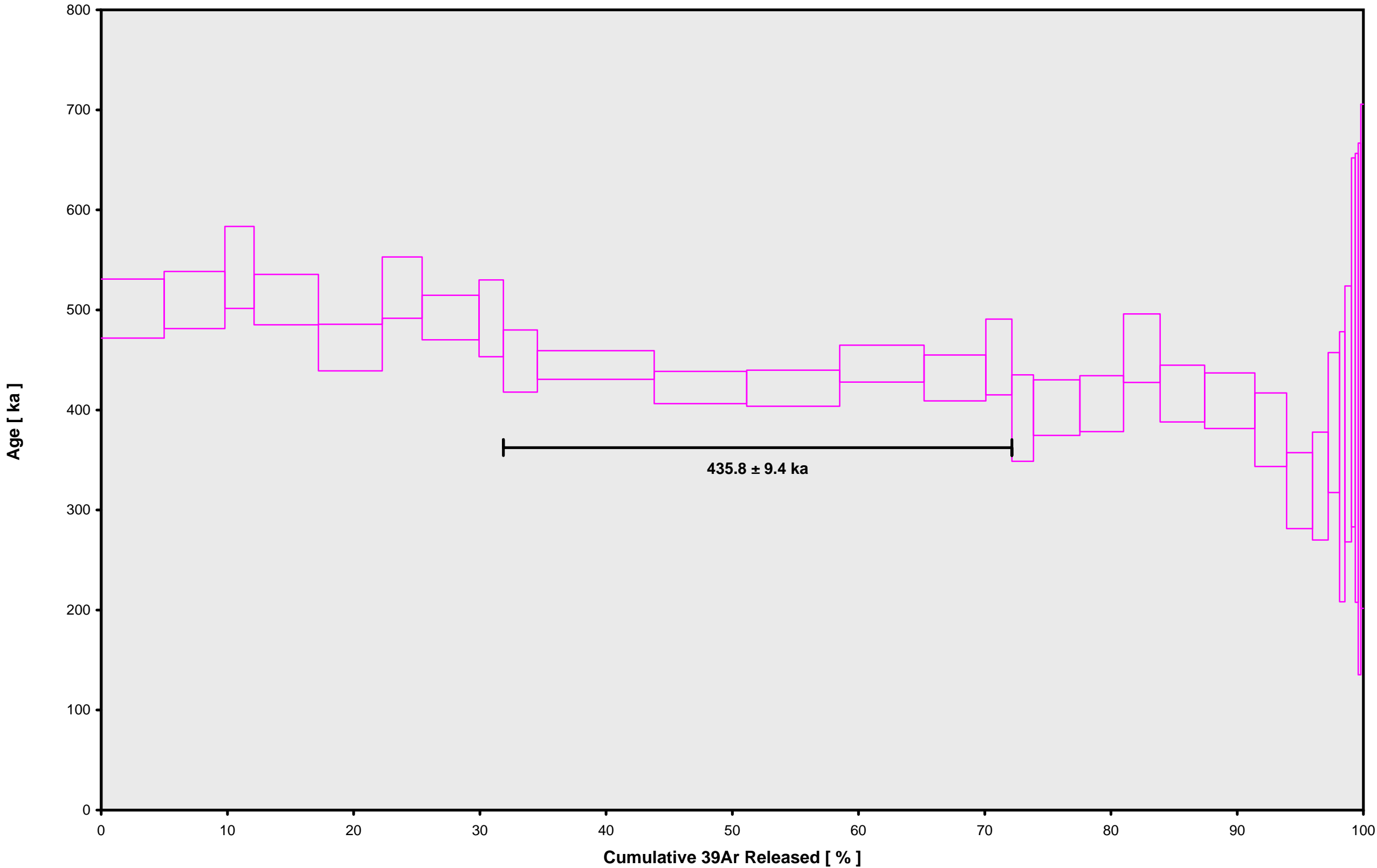
[illegible]



OSU Argon Geochronology Lab																											
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	
15D10306	2.0 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D10308	2.2 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D10309	2.4 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D10310	2.6 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D10312	2.8 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D10313	3.0 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D10314	3.3 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D10315	3.6 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D10317	3.9 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D10318	4.3 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D10319	4.6 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D10320	4.9 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D10322	5.2 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D10323	5.5 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D10324	5.8 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D10326	6.1 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D10327	6.5 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D10328	7.0 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D10330	7.6 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D10331	8.4 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D10332	9.4 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D10334	10.5 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D10335	11.7 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D10336	13.1 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D10338	14.7 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D10339	16.5 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D10340	18.5 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D10342	19.8 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D10343	21.7 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D10344	22.8 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D10346	24.3 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0



15D10305.AGE >>> 1180043-1A >>> KERGUELEN | FALLOON (14-PIL-01) PROJECT



Ar-Ages in ka

WEIGHTED PLATEAU

$435.8 \pm 9.4$

TOTAL FUSION

$446.5 \pm 5.5$

NORMAL ISOCHRON

$421.8 \pm 55.6$

INVERSE ISOCHRON

$422.4 \pm 54.5$

MSWD (PROBABILITY)

1.62 (14%)

Sample Info

Groundmass

Kerguelen Plateau

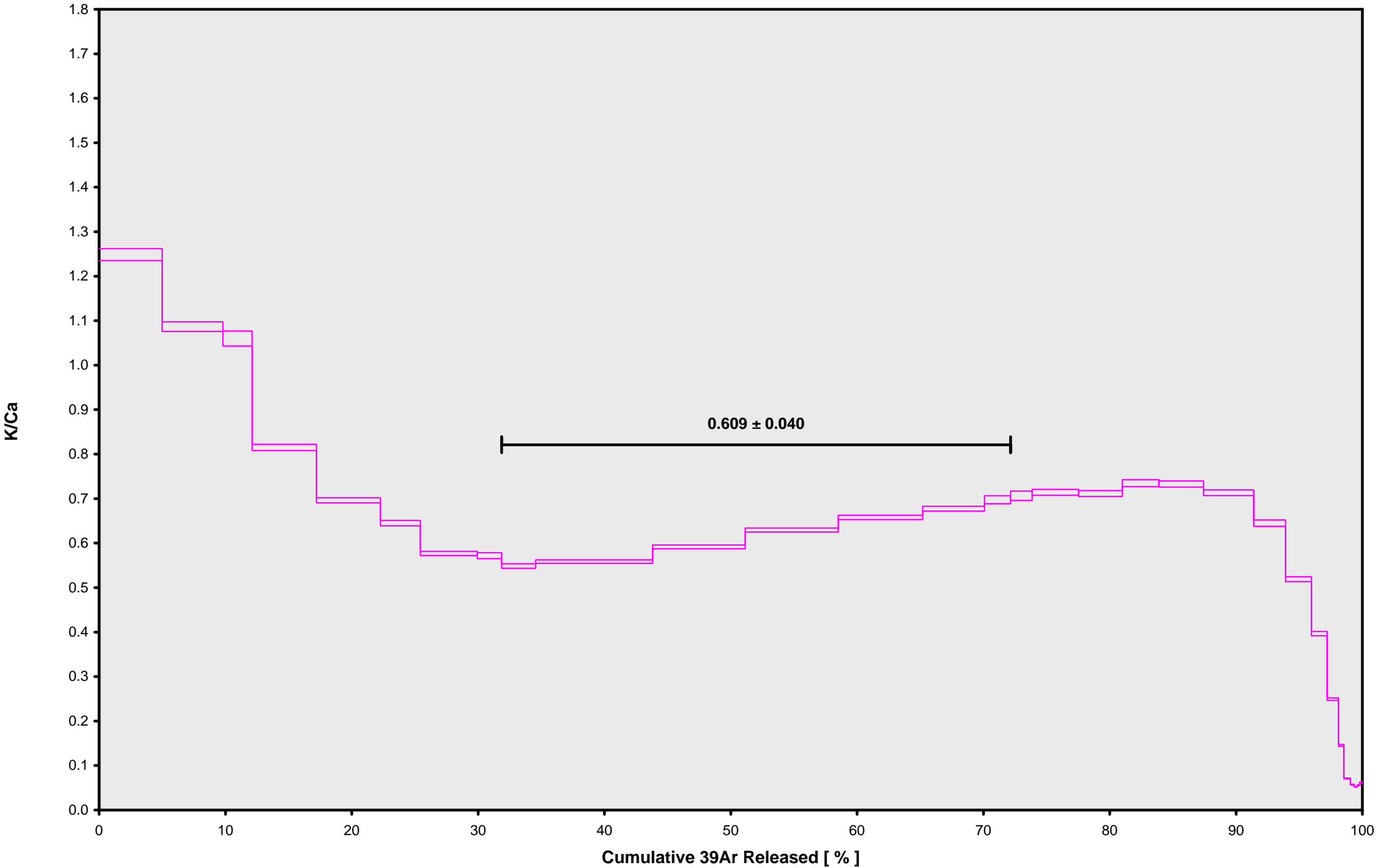
Dan Miggins

IRR = 14-OSU-07 (7B24-14)

J =  $0.00176774 \pm 0.00000203$



15D10305.AGE >>> 1180043-1A >>> KERGUELEN | FALLOON (14-PIL-01) PROJECT



**Ar-Ages in ka**

**WEIGHTED PLATEAU**

435.8  $\pm$  9.4

**TOTAL FUSION**

446.5  $\pm$  5.5

**NORMAL ISOCHRON**

421.8  $\pm$  55.6

**INVERSE ISOCHRON**

422.4  $\pm$  54.5

**Sample Info**

**Groundmass**

Kerguelen Plateau

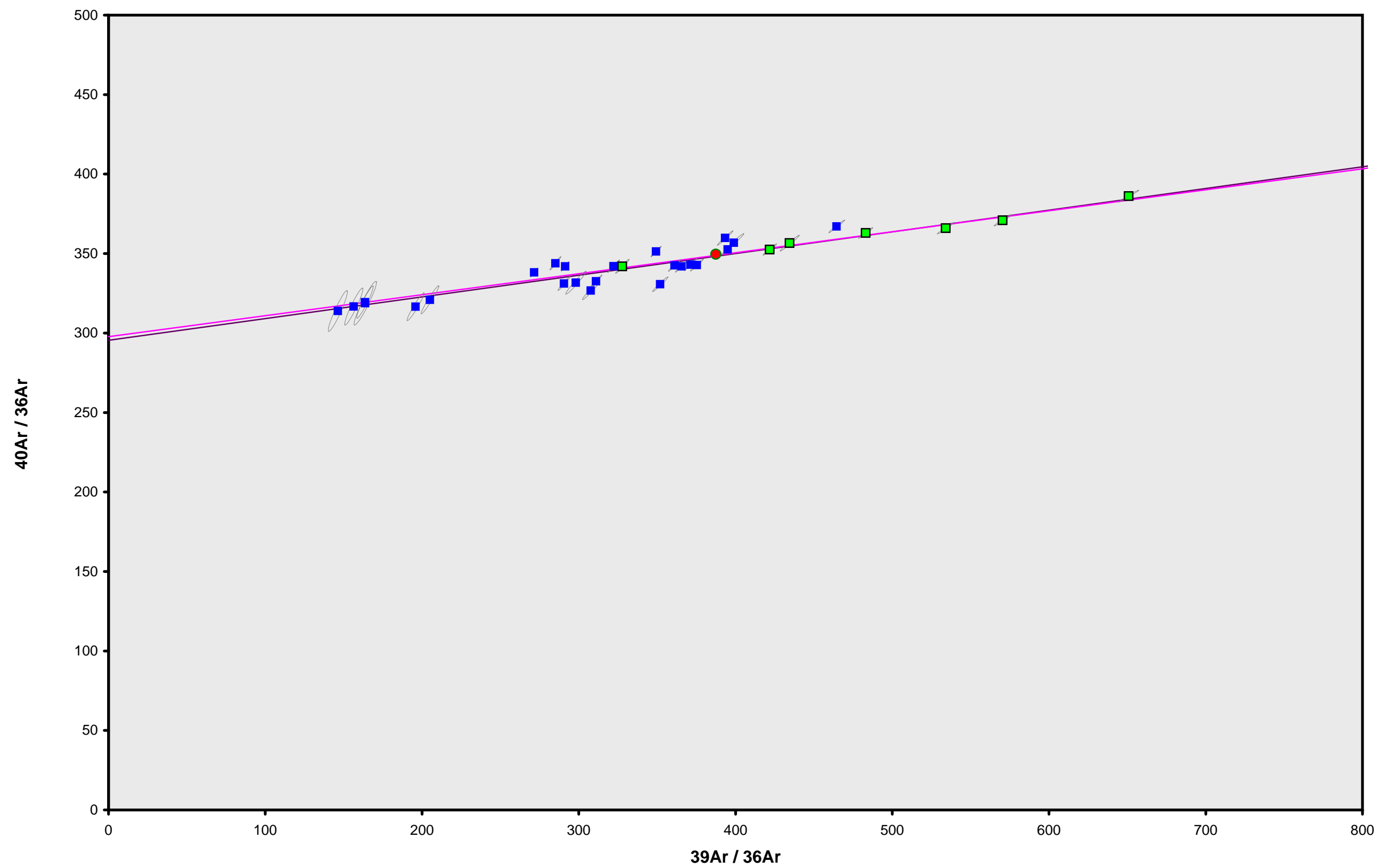
Dan Miggins

IRR = 14-OSU-07 (7B24-14)

J = 0.00176774  $\pm$  0.00000203



15D10305.AGE >>> 1180043-1A >>> KERGUELEN | FALLOON (14-PIL-01) PROJECT



**Ar-Ages in ka**

**WEIGHTED PLATEAU**  
 $435.8 \pm 9.4$

**TOTAL FUSION**  
 $446.5 \pm 5.5$

**NORMAL ISOCHRON**  
 $421.8 \pm 55.6$

**INVERSE ISOCHRON**  
 $422.4 \pm 54.5$

**MSWD (PROBABILITY)**  
1.86 (10%)

**40AR/36AR INTERCEPT**  
 $297.8 \pm 9.0$

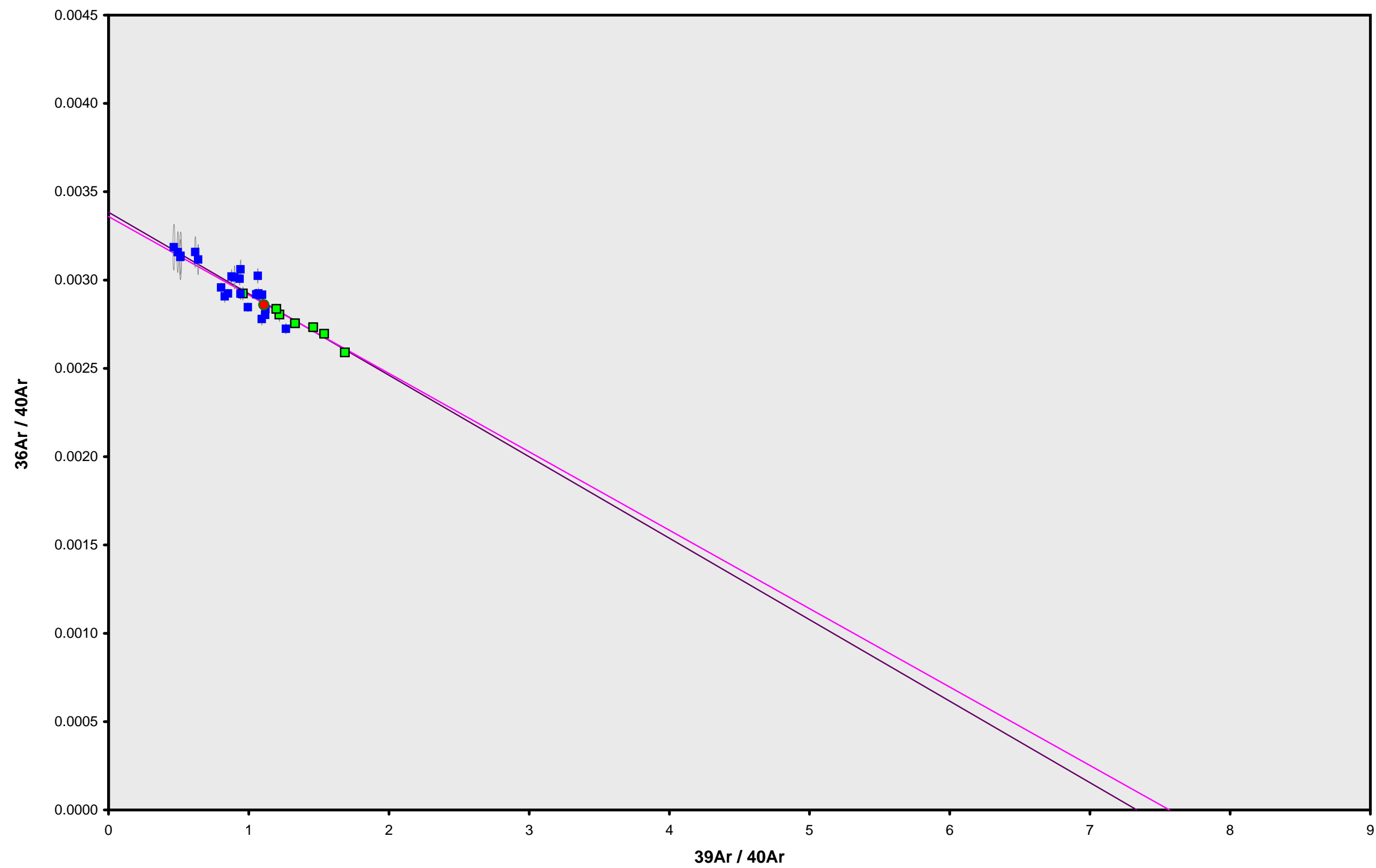
**Sample Info**

Groundmass  
Kerguelen Plateau  
Dan Miggins

IRR = 14-OSU-07 (7B24-14)  
J =  $0.00176774 \pm 0.00000203$



15D10305.AGE >>> 1180043-1A >>> KERGUELEN | FALLOON (14-PIL-01) PROJECT



**Ar-Ages in ka**

**WEIGHTED PLATEAU**  
435.8 ± 9.4

**TOTAL FUSION**  
446.5 ± 5.5

**NORMAL ISOCHRON**  
421.8 ± 55.6

**INVERSE ISOCHRON**  
422.4 ± 54.5

**MSWD (PROBABILITY)**  
1.85 (10%)

**SPREADING FACTOR**  
9.6%

**40AR/36AR INTERCEPT**  
297.7 ± 8.9

**Sample Info**

Groundmass  
Kerguelen Plateau  
Dan Miggins

IRR = 14-OSU-07 (7B24-14)  
J = 0.00176774 ± 0.00000203



Incremental Heating		36Ar(a) [fA]	37Ar(ca) [fA]	38Ar(cl) [fA]	39Ar(k) [fA]	40Ar(r) [fA]	Age ± 2σ (ka)	40Ar(r) (%)	39Ar(k) (%)	K/Ca ± 2σ
15D10264	2.0 %	0.0457977	14.0806	0.0000000	30.3935	2.90675	303.6 ± 54.2	17.65	0.59	0.93 ± 0.04
15D10266	2.2 %	0.0496676	20.3661	0.0000000	45.2003	3.69857	259.7 ± 36.1	20.08	0.88	0.95 ± 0.03
15D10267	2.4 % ✓	0.0398951	22.3244	0.0000000	50.2095	4.89719	309.6 ± 31.0	29.26	0.97	0.97 ± 0.02
15D10268	2.6 % ✓	0.0508406	38.9151	0.0134878	88.6011	8.38786	300.5 ± 17.8	35.69	1.72	0.98 ± 0.02
15D10270	2.8 % ✓	0.0458148	42.6808	0.0000000	97.6178	9.00573	292.8 ± 17.1	39.77	1.89	0.98 ± 0.01
15D10271	3.0 % ✓	0.0630154	82.9798	0.0000000	191.3670	17.90117	296.9 ± 10.0	48.76	3.71	0.99 ± 0.01
15D10272	3.3 % ✓	0.0552142	96.2102	0.0919541	216.7844	20.02846	293.3 ± 7.9	54.78	4.20	0.97 ± 0.01
15D10273	3.6 % ✓	0.0695274	170.8129	0.1082873	365.5183	33.70987	292.8 ± 5.9	61.71	7.09	0.92 ± 0.01
15D10275	3.9 % ✓	0.0556862	196.0006	0.1935478	398.1297	36.66736	292.4 ± 5.1	68.51	7.72	0.87 ± 0.01
15D10276	4.3 % ✓	0.0427566	183.9084	0.1443996	371.3344	33.89554	289.8 ± 4.9	72.26	7.20	0.87 ± 0.01
15D10277	4.6 % ✓	0.0351311	174.5698	0.1505054	354.6551	32.76211	293.2 ± 4.9	75.31	6.88	0.87 ± 0.01
15D10278	4.9 % ✓	0.0459863	215.0328	0.1807852	476.4354	43.19016	287.8 ± 4.2	75.43	9.24	0.95 ± 0.01
15D10280	5.2 % ✓	0.0233926	105.5285	0.1153430	259.4208	23.40398	286.4 ± 6.0	76.54	5.03	1.06 ± 0.01
15D10281	5.5 % ✓	0.0312221	106.0083	0.1130173	295.6016	26.77489	287.5 ± 5.7	73.76	5.73	1.20 ± 0.01
15D10282	5.8 % ✓	0.0240036	68.5335	0.0884786	207.2704	18.50977	283.5 ± 7.5	71.71	4.02	1.30 ± 0.01
15D10284	6.1 % ✓	0.0201914	53.5145	0.1054097	168.8099	15.46345	290.8 ± 9.7	71.59	3.27	1.36 ± 0.02
15D10285	6.5 % ✓	0.0186194	38.9893	0.0937517	125.8593	11.34457	286.1 ± 12.2	66.84	2.44	1.39 ± 0.02
15D10286	7.0 % ✓	0.0178366	35.4040	0.0375439	112.7676	10.28686	289.6 ± 12.8	65.64	2.19	1.37 ± 0.02
15D10288	7.6 %	0.0257171	40.6988	0.0398233	128.5427	11.37721	281.0 ± 12.0	59.55	2.49	1.36 ± 0.02
15D10289	8.4 %	0.0316679	44.3257	0.0890785	132.5798	11.75139	281.4 ± 11.5	55.32	2.57	1.29 ± 0.02
15D10290	9.4 %	0.0447427	54.7556	0.1605658	151.1543	12.83114	269.5 ± 11.2	48.96	2.93	1.19 ± 0.01
15D10292	10.5 %	0.0523767	65.9883	0.0971028	168.5717	15.06254	283.6 ± 10.9	49.05	3.27	1.10 ± 0.01
15D10293	11.7 %	0.0561251	65.8530	0.1136958	152.3421	13.53974	282.1 ± 11.8	44.72	2.95	0.99 ± 0.01
15D10294	13.1 %	0.0699753	71.4246	0.1424193	145.1311	12.68760	277.5 ± 12.6	37.86	2.81	0.87 ± 0.01
15D10296	14.7 %	0.0914593	89.1971	0.1676717	140.7729	11.35400	256.0 ± 14.1	29.47	2.73	0.68 ± 0.01
15D10297	16.5 %	0.1174628	172.9888	0.1919779	127.4757	10.38748	258.7 ± 18.2	22.97	2.47	0.32 ± 0.00
15D10298	18.5 %	0.1059276	156.1201	0.1724475	66.8514	5.19720	246.8 ± 33.8	14.21	1.30	0.18 ± 0.00
15D10300	19.8 %	0.0734308	110.0259	0.0812575	35.1546	3.42160	309.0 ± 59.3	13.60	0.68	0.14 ± 0.00
15D10301	21.7 %	0.0638844	108.4815	0.0709951	22.9720	1.97638	273.1 ± 83.0	9.47	0.45	0.09 ± 0.00
15D10302	22.8 %	0.0498391	78.7754	0.0095448	15.3873	1.16369	240.1 ± 114.1	7.32	0.30	0.08 ± 0.00
15D10304	24.3 %	0.0468676	84.1040	0.0906107	12.7658	1.15031	286.0 ± 137.9	7.66	0.25	0.07 ± 0.00
Σ		1.5640747	2808.5982	2.8637020	5155.6775	464.73458				

Information on Analysis	Results	40(r)/39(k) ± 2σ	Age ± 2σ (ka)	MSWD	39Ar(k) (%,n)	K/Ca ± 2σ
Sample = 154-1	Age Plateau	0.09139 ± 0.00056 ± 0.61%	290.1 ± 1.9 ± 0.65%	1.07	73.32	0.97 ± 0.07
Material = Groundmass				38%	16	
Location = Kerguelen Plateau				1.73	2σ Confidence Limit	
Analyst = Dan Miggins	Total Fusion Age			1.0322	Error Magnification	
Project = KERGUELEN   FALLOON (14-I						
Mass Discrimination Law = LIN						
Irradiation = 14-OSU-07 (7B26-14)		0.09014 ± 0.00061 ± 0.68%	286.1 ± 2.0 ± 0.72%		31	0.79 ± 0.00
J = 0.00175554 ± 0.00000202			Full External Error ± 6.8			
FCT-NM = 28.201 ± 0.023 Ma			Analytical Error ± 1.9			



Normal Isochron		39(k)/36(a) ± 2σ		40(a+r)/36(a) ± 2σ	r.i.
15D10264	2.0 %		663.65 ± 23.85	358.97 ± 13.48	0.9499
15D10266	2.2 %		910.06 ± 29.80	369.97 ± 12.65	0.9530
15D10267	2.4 %	✓	1258.54 ± 48.48	418.25 ± 16.75	0.9591
15D10268	2.6 %	✓	1742.73 ± 53.67	460.48 ± 14.62	0.9667
15D10270	2.8 %	✓	2130.71 ± 77.58	492.07 ± 18.34	0.9748
15D10271	3.0 %	✓	3036.83 ± 93.49	579.58 ± 18.07	0.9854
15D10272	3.3 %	✓	3926.25 ± 121.97	658.24 ± 20.70	0.9858
15D10273	3.6 %	✓	5257.18 ± 167.36	780.34 ± 24.97	0.9932
15D10275	3.9 %	✓	7149.52 ± 264.90	953.96 ± 35.49	0.9948
15D10276	4.3 %	✓	8684.84 ± 374.92	1088.26 ± 47.16	0.9952
15D10277	4.6 %	✓	10095.20 ± 501.92	1228.07 ± 61.26	0.9959
15D10278	4.9 %	✓	10360.37 ± 452.95	1234.70 ± 54.11	0.9967
15D10280	5.2 %	✓	11089.86 ± 733.30	1295.99 ± 86.04	0.9955
15D10281	5.5 %	✓	9467.71 ± 511.20	1153.06 ± 62.52	0.9952
15D10282	5.8 %	✓	8634.96 ± 547.76	1066.62 ± 68.09	0.9933
15D10284	6.1 %	✓	8360.50 ± 671.56	1061.34 ± 85.74	0.9940
15D10285	6.5 %	✓	6759.58 ± 549.00	904.79 ± 74.14	0.9908
15D10286	7.0 %	✓	6322.27 ± 499.59	872.23 ± 69.69	0.9887
15D10288	7.6 %		4998.34 ± 294.45	737.90 ± 44.05	0.9862
15D10289	8.4 %		4186.57 ± 198.65	666.58 ± 32.15	0.9830
15D10290	9.4 %		3378.30 ± 127.06	582.28 ± 22.28	0.9815
15D10292	10.5 %		3218.45 ± 114.19	583.08 ± 20.97	0.9847
15D10293	11.7 %		2714.33 ± 87.80	536.74 ± 17.66	0.9814
15D10294	13.1 %		2074.03 ± 54.79	476.82 ± 12.86	0.9763
15D10296	14.7 %		1539.19 ± 34.16	419.64 ± 9.51	0.9748
15D10297	16.5 %		1085.24 ± 22.15	383.93 ± 7.97	0.9775
15D10298	18.5 %		631.11 ± 13.88	344.56 ± 7.76	0.9697
15D10300	19.8 %		478.74 ± 13.98	342.10 ± 10.26	0.9648
15D10301	21.7 %		359.59 ± 10.98	326.44 ± 10.29	0.9500
15D10302	22.8 %		308.74 ± 11.08	318.85 ± 11.88	0.9383
15D10304	24.3 %		272.38 ± 10.45	320.04 ± 12.71	0.9357

Results	40(a)/36(a) ± 2σ		40(r)/39(k) ± 2σ	Age ± 2σ (ka)	MSWD
Normal Isochron	304.49 ± 6.63 ± 2.18%		0.09008 ± 0.00108 ± 1.20%	285.9 ± 3.5 ± 1.23%	0.61
			Full External Error ± 7.3		
			Analytical Error ± 3.4		
Statistics	2σ Confidence Limit	1.76	Convergence	0.000000787330	
	Error Magnification	1.0000	Number of Iterations	20	
	Number of Data Points	16	Calculated Line	Weighted York-2	



Inverse Isochron		39(k)/40(a+r) ± 2σ		36(a)/40(a+r) ± 2σ	r.i.
15D10264	2.0 %		1.8487566 ± 0.0216979	0.00278575 ± 0.00010459	0.2899
15D10266	2.2 %		2.4598342 ± 0.0254800	0.00270295 ± 0.00009240	0.2874
15D10267	2.4 %	✓	3.0090463 ± 0.0341101	0.00239091 ± 0.00009573	0.2728
15D10268	2.6 %	✓	3.7845536 ± 0.0307425	0.00217163 ± 0.00006897	0.2445
15D10270	2.8 %	✓	4.3301025 ± 0.0360225	0.00203224 ± 0.00007576	0.2147
15D10271	3.0 %	✓	5.2397452 ± 0.0278091	0.00172540 ± 0.00005379	0.1582
15D10272	3.3 %	✓	5.9647516 ± 0.0315041	0.00151920 ± 0.00004778	0.1563
15D10273	3.6 %	✓	6.7370165 ± 0.0250628	0.00128149 ± 0.00004100	0.1014
15D10275	3.9 %	✓	7.4945383 ± 0.0284118	0.00104826 ± 0.00003899	0.0894
15D10276	4.3 %	✓	7.9805181 ± 0.0336921	0.00091890 ± 0.00003982	0.0878
15D10277	4.6 %	✓	8.2203899 ± 0.0370367	0.00081429 ± 0.00004062	0.0824
15D10278	4.9 %	✓	8.3910316 ± 0.0297409	0.00080992 ± 0.00003549	0.0697
15D10280	5.2 %	✓	8.5570827 ± 0.0536359	0.00077161 ± 0.00005123	0.0899
15D10281	5.5 %	✓	8.2109235 ± 0.0434759	0.00086726 ± 0.00004702	0.0913
15D10282	5.8 %	✓	8.0956024 ± 0.0599082	0.00093754 ± 0.00005985	0.1118
15D10284	6.1 %	✓	7.8772722 ± 0.0696105	0.00094220 ± 0.00007612	0.1065
15D10285	6.5 %	✓	7.4708983 ± 0.0827734	0.00110523 ± 0.00009057	0.1327
15D10286	7.0 %	✓	7.2484117 ± 0.0869927	0.00114649 ± 0.00009160	0.1477
15D10288	7.6 %		6.7737455 ± 0.0668841	0.00135520 ± 0.00008090	0.1616
15D10289	8.4 %		6.2806472 ± 0.0556887	0.00150019 ± 0.00007235	0.1787
15D10290	9.4 %		5.8018912 ± 0.0425097	0.00171740 ± 0.00006571	0.1837
15D10292	10.5 %		5.5197271 ± 0.0345773	0.00171503 ± 0.00006169	0.1652
15D10293	11.7 %		5.0570464 ± 0.0319506	0.00186309 ± 0.00006129	0.1822
15D10294	13.1 %		4.3497623 ± 0.0253852	0.00209725 ± 0.00005657	0.2028
15D10296	14.7 %		3.6678508 ± 0.0185344	0.00238298 ± 0.00005401	0.2041
15D10297	16.5 %		2.8266542 ± 0.0123898	0.00260463 ± 0.00005408	0.1854
15D10298	18.5 %		1.8316065 ± 0.0100735	0.00290222 ± 0.00006535	0.2154
15D10300	19.8 %		1.3994431 ± 0.0110398	0.00292315 ± 0.00008765	0.2288
15D10301	21.7 %		1.1015523 ± 0.0108605	0.00306338 ± 0.00009659	0.2567
15D10302	22.8 %		0.9682927 ± 0.0125111	0.00313628 ± 0.00011683	0.2775
15D10304	24.3 %		0.8510719 ± 0.0119653	0.00312457 ± 0.00012410	0.2712

Results	40(a)/36(a) ± 2σ		40(r)/39(k) ± 2σ	Age ± 2σ (ka)	MSWD
Inverse Isochron	304.30 ± 6.64 ± 2.18%		0.09016 ± 0.00108 ± 1.20%	286.2 ± 3.5 ± 1.23%	0.61 86%
			Full External Error ± 7.4 Analytical Error ± 3.4		
Statistics	2σ Confidence Limit	1.76	Convergence	0.0165631150	
	Error Magnification	1.0000	Number of Iterations	2	
	Number of Data Points	16	Calculated Line	Weighted York-2	
	Spreading Factor	50.0%			



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Relative Abundances		36Ar [fA]	%1σ	37Ar [fA]	%1σ	38Ar [fA]	%1σ	39Ar [fA]	%1σ	40Ar [fA]	%1σ	40(r)/39(k) ± 2σ	Age ± 2σ (ka)	40Ar(r) (%)	39Ar(k) (%)	K/Ca ± 2σ
15D10264	2.0 %	0.0495150	1.649	14.0806	2.011	0.317904	12.159	30.4030	0.158	16.47067	0.564	0.09564 ± 0.01708	303.6 ± 54.2	17.65	0.59	0.93 ± 0.04
15D10266	2.2 %	0.0550442	1.468	20.3661	1.337	0.515304	7.236	45.2140	0.118	18.42098	0.503	0.08183 ± 0.01137	259.7 ± 36.1	20.08	0.88	0.95 ± 0.03
15D10267	2.4 %	✓0.0457888	1.669	22.3244	1.174	0.539825	7.156	50.2246	0.108	16.73691	0.555	0.09753 ± 0.00976	309.6 ± 31.0	29.26	0.97	0.97 ± 0.02
15D10268	2.6 %	✓0.0611162	1.272	38.9151	0.794	1.031812	3.738	88.6273	0.085	23.50073	0.396	0.09467 ± 0.00562	300.5 ± 17.8	35.69	1.72	0.98 ± 0.02
15D10270	2.8 %	✓0.0570825	1.453	42.6808	0.713	1.114590	3.565	97.6465	0.081	22.64259	0.406	0.09226 ± 0.00539	292.8 ± 17.1	39.77	1.89	0.98 ± 0.01
15D10271	3.0 %	✓0.0849220	1.134	82.9798	0.472	2.188174	1.678	191.4229	0.070	36.71549	0.254	0.09354 ± 0.00315	296.9 ± 10.0	48.76	3.71	0.99 ± 0.01
15D10272	3.3 %	✓0.0806274	1.054	96.2102	0.434	2.570618	1.450	216.8492	0.069	36.56321	0.253	0.09239 ± 0.00249	293.3 ± 7.9	54.78	4.20	0.97 ± 0.01
15D10273	3.6 %	✓0.1146382	0.954	170.8129	0.366	4.283255	0.955	365.6333	0.067	54.62439	0.173	0.09222 ± 0.00186	292.8 ± 5.9	61.71	7.09	0.92 ± 0.01
15D10275	3.9 %	✓0.1074594	0.944	196.0006	0.354	4.737395	0.827	398.2616	0.066	53.52475	0.176	0.09210 ± 0.00161	292.4 ± 5.1	68.51	7.72	0.87 ± 0.01
15D10276	4.3 %	✓0.0913301	0.992	183.9084	0.361	4.380733	0.886	371.4582	0.066	46.90516	0.199	0.09128 ± 0.00156	289.8 ± 4.9	72.26	7.20	0.87 ± 0.01
15D10277	4.6 %	✓0.0812401	1.055	174.5698	0.363	4.195472	0.940	354.7725	0.067	43.50154	0.213	0.09238 ± 0.00155	293.2 ± 4.9	75.31	6.88	0.87 ± 0.01
15D10278	4.9 %	✓0.1027821	0.958	215.0328	0.354	5.614204	0.718	476.5802	0.066	57.26032	0.163	0.09065 ± 0.00131	287.8 ± 4.2	75.43	9.24	0.95 ± 0.01
15D10280	5.2 %	✓0.0512694	1.490	105.5285	0.425	3.073390	1.266	259.4918	0.068	30.57851	0.303	0.09022 ± 0.00191	286.4 ± 6.0	76.54	5.03	1.06 ± 0.01
15D10281	5.5 %	✓0.0592252	1.409	106.0083	0.411	3.484272	1.095	295.6729	0.067	36.29957	0.254	0.09058 ± 0.00180	287.5 ± 5.7	73.76	5.73	1.20 ± 0.01
15D10282	5.8 %	✓0.0421097	1.793	68.5335	0.524	2.452655	1.553	207.3166	0.070	25.81219	0.360	0.08930 ± 0.00235	283.5 ± 7.5	71.71	4.02	1.30 ± 0.01
15D10284	6.1 %	✓0.0343350	2.348	53.5145	0.601	2.030984	1.821	168.8459	0.071	21.60049	0.433	0.09160 ± 0.00305	290.8 ± 9.7	71.59	3.27	1.36 ± 0.02
15D10285	6.5 %	✓0.0289266	2.599	38.9893	0.759	1.530052	2.490	125.8855	0.075	16.97372	0.545	0.09014 ± 0.00384	286.1 ± 12.2	66.84	2.44	1.39 ± 0.02
15D10286	7.0 %	✓0.0271888	2.575	35.4040	0.852	1.324665	2.785	112.7915	0.077	15.67146	0.591	0.09122 ± 0.00404	289.6 ± 12.8	65.64	2.19	1.37 ± 0.02
15D10288	7.6 %	0.0364675	2.065	40.6988	0.728	1.508011	2.438	128.5700	0.075	19.10643	0.485	0.08851 ± 0.00377	281.0 ± 12.0	59.55	2.49	1.36 ± 0.02
15D10289	8.4 %	0.0433832	1.721	44.3257	0.696	1.604371	2.357	132.6096	0.074	21.24316	0.434	0.08864 ± 0.00363	281.4 ± 11.5	55.32	2.57	1.29 ± 0.02
15D10290	9.4 %	0.0592222	1.412	54.7556	0.583	1.889826	2.008	151.1912	0.074	26.20526	0.357	0.08489 ± 0.00351	269.5 ± 11.2	48.96	2.93	1.19 ± 0.01
15D10292	10.5 %	0.0698122	1.323	65.9883	0.533	2.026155	1.954	168.6161	0.071	30.71011	0.303	0.08935 ± 0.00344	283.6 ± 10.9	49.05	3.27	1.10 ± 0.01
15D10293	11.7 %	0.0735274	1.227	65.8530	0.530	1.858754	2.100	152.3864	0.072	30.27858	0.306	0.08888 ± 0.00372	282.1 ± 11.8	44.72	2.95	0.99 ± 0.01
15D10294	13.1 %	0.0888527	1.033	71.4246	0.494	1.808082	2.181	145.1791	0.073	33.51187	0.281	0.08742 ± 0.00398	277.5 ± 12.6	37.86	2.81	0.87 ± 0.01
15D10296	14.7 %	0.1150325	0.875	89.1971	0.458	1.788001	2.238	140.8330	0.073	38.52240	0.241	0.08065 ± 0.00445	256.0 ± 14.1	29.47	2.73	0.68 ± 0.01
15D10297	16.5 %	0.1631606	0.725	172.9888	0.365	1.667009	2.188	127.5921	0.076	45.22648	0.205	0.08149 ± 0.00573	258.7 ± 18.2	22.97	2.47	0.32 ± 0.00
15D10298	18.5 %	0.1471692	0.782	156.1201	0.372	0.955185	3.847	66.9565	0.094	36.56632	0.258	0.07774 ± 0.01064	246.8 ± 33.8	14.21	1.30	0.18 ± 0.00
15D10300	19.8 %	0.1024898	1.035	110.0259	0.418	0.496570	7.502	35.2286	0.142	25.15590	0.367	0.09733 ± 0.01870	309.0 ± 59.3	13.60	0.68	0.14 ± 0.00
15D10301	21.7 %	0.0925341	1.036	108.4815	0.420	0.345864	11.635	23.0450	0.208	20.87742	0.446	0.08603 ± 0.02614	273.1 ± 83.0	9.47	0.45	0.09 ± 0.00
15D10302	22.8 %	0.0706372	1.242	78.7754	0.459	0.195062	18.481	15.4403	0.288	15.90667	0.577	0.07563 ± 0.03594	240.1 ± 114.1	7.32	0.30	0.08 ± 0.00
15D10304	24.3 %	0.0690847	1.273	84.1040	0.451	0.245814	15.913	12.8224	0.338	15.01259	0.615	0.09011 ± 0.04345	286.0 ± 137.9	7.66	0.25	0.07 ± 0.00
Σ		2.3059742	0.216	2808.5982	0.088	61.774008	0.346	5157.5676	0.015	932.12588	0.056					

Information on Analysis and Constants Used in Calculations		Results					
		40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (ka)	MSWD	39Ar(k) (% ,n)	K/Ca ± 2σ
Sample = 154-1	Age Equations = Min et al. (2000)						
Material = Groundmass	Negative Intensities = Allowed						
Location = Kerguelen Plateau	Decay Constant 40K = 5.530 ± 0.048 E-10 1/a		0.09139 ± 0.00056 ± 0.61%	290.1 ± 1.9 ± 0.65%	1.07 38%	73.32 16	0.97 ± 0.07
Analyst = Dan Miggins	Decay Constant 39Ar = 2.940 ± 0.016 E-07 1/h			Full External Error ± 6.8	1.73	2σ Confidence Limit	
Project = KERGUELEN   FALLOON (14-PIL-01)	Decay Constant 37Ar = 8.230 ± 0.012 E-04 1/h			Analytical Error ± 1.8	1.0322	Error Magnification	
Mass Discrimination Law = LIN	Decay Constant 36Cl = 2.257 ± 0.015 E-06 1/a						
Irradiation = 14-OSU-07 (7B26-14)	Decay Constant 40K(EC,β <sup>+</sup> ) = 0.580 ± 0.009 E-10 1/a		0.09014 ± 0.00061 ± 0.68%	286.1 ± 2.0 ± 0.72%		31	0.79 ± 0.00
J = 0.00175554 ± 0.00000202	Decay Constant 40K(β <sup>-</sup> ) = 4.950 ± 0.043 E-10 1/a			Full External Error ± 6.8			
FCT-NM = 28.201 ± 0.023 Ma	Atmospheric Ratio 40/36(a) = 295.50			Analytical Error ± 1.9			
IGSN = Undefined	Atmospheric Ratio 38/36(a) = 0.1869						
Preferred Age = Undefined	Production Ratio 39/37(ca) = 0.000673						
Classification = Undefined	Production Ratio 38/37(ca) = 0.000014	304.49 ± 6.63 ± 2.18%	0.09008 ± 0.00108 ± 1.20%	285.9 ± 3.5 ± 1.23%	0.61 86%	73.32 16	
Experiment Type = Incremental Heating	Production Ratio 36/37(ca) = 0.000264			Full External Error ± 7.3	1.76	2σ Confidence Limit	
Extraction Method = Undefined	Production Ratio 40/39(k) = 0.001010			Analytical Error ± 3.4	1.0000	Error Magnification	
Heating = 77 sec	Production Ratio 38/39(k) = 0.011380				20	Number of Iterations	
Isolation = 6.00 min	Production Ratio 36/38(cl) = 262.80 ± 1.71				0.0000007873	Convergence	
Instrument = ARGUS-VI-D	Scaling Ratio K/Ca = 0.430						
Lithology = Undefined	Abundance Ratio 40K/K = 1.1700 ± 0.0100 E-04						
Lat-Lon = Undefined - Undefined	Atomic Weight K = 39.0983 ± 0.0001 g	304.30 ± 6.64 ± 2.18%	0.09016 ± 0.00108 ± 1.20%	286.2 ± 3.5 ± 1.23%	0.61 86%	73.32 16	
Collector Calibrations = 40Ar 36Ar				Full External Error ± 7.4	1.76	2σ Confidence Limit	

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ArArCALC v2.6.2 -- Beta Version



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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
15D10264	2.0 %	0.0457977	1.79	0.0000000	0.00	0.0037173	2.01	0.0000000	0.00	14.0806	2.01	0.0085596	1.79	0.0000000	0.00	0.345878	0.16	0.0001957	2.01	0.0000000	0.00	30.3935	0.16	0.0094762	2.01	2.90675	8.93	13.53323	1.79	0.0000000	0.00	0.0306975	0.16
15D10266	2.2 %	0.0496676	1.63	0.0000000	0.00	0.0053766	1.34	0.0000000	0.00	20.3661	1.34	0.0092829	1.63	0.0000000	0.00	0.514379	0.12	0.0002831	1.34	0.0000000	0.00	45.2003	0.12	0.0137064	1.34	3.69857	6.95	14.67677	1.63	0.0000000	0.00	0.0456523	0.12
15D10267	2.4 %	✓ 0.0398951	1.92	0.0000000	0.00	0.0058936	1.17	0.0000000	0.00	22.3244	1.17	0.0074564	1.92	0.0000000	0.00	0.571385	0.11	0.0003103	1.17	0.0000000	0.00	50.2095	0.11	0.0150243	1.17	4.89719	5.00	11.78901	1.92	0.0000000	0.00	0.0507116	0.11
15D10268	2.6 %	✓ 0.0508406	1.54	0.0000000	0.00	0.0102736	0.79	0.0000020	286.06	38.9151	0.79	0.0095021	1.54	0.0000000	0.00	1.008281	0.09	0.0005409	0.79	0.0134878	286.07	88.6011	0.09	0.0261899	0.79	8.38786	2.97	15.02339	1.54	0.0000000	0.00	0.0894871	0.09
15D10270	2.8 %	✓ 0.0458148	1.82	0.0000000	0.00	0.0112677	0.71	0.0000000	0.00	42.6808	0.71	0.0085628	1.82	0.0000000	0.00	1.110891	0.08	0.0005933	0.71	0.0000000	0.00	97.6178	0.08	0.0287242	0.71	9.00573	2.92	13.53826	1.82	0.0000000	0.00	0.0985940	0.08
15D10271	3.0 %	✓ 0.0630154	1.54	0.0000000	0.00	0.0219067	0.47	0.0000000	0.00	82.9798	0.47	0.0117776	1.54	0.0000000	0.00	2.177757	0.07	0.0011534	0.47	0.0000000	0.00	191.3670	0.07	0.0558454	0.47	17.90117	1.68	18.62104	1.54	0.0000000	0.00	0.1932807	0.07
15D10272	3.3 %	✓ 0.0552142	1.55	0.0000000	0.00	0.0253995	0.43	0.0000138	40.60	96.2102	0.43	0.0103195	1.55	0.0000000	0.00	2.467007	0.07	0.0013373	0.43	0.0919541	40.61	216.7844	0.07	0.0647494	0.43	20.02846	1.35	16.31579	1.55	0.0000000	0.00	0.2189523	0.07
15D10273	3.6 %	✓ 0.0695274	1.59	0.0000000	0.00	0.0450946	0.37	0.0000162	37.88	170.8129	0.37	0.0129947	1.59	0.0000000	0.00	4.159598	0.07	0.0023743	0.37	0.1082873	37.89	365.5183	0.07	0.1149571	0.37	33.70987	1.01	20.54534	1.59	0.0000000	0.00	0.3691735	0.07
15D10275	3.9 %	✓ 0.0556862	1.85	0.0000000	0.00	0.0517442	0.35	0.0000290	20.33	196.0006	0.35	0.0104078	1.85	0.0000000	0.00	4.530715	0.07	0.0027244	0.35	0.1935478	20.35	398.1297	0.07	0.1319084	0.35	36.66736	0.87	16.45528	1.85	0.0000000	0.00	0.4021110	0.07
15D10276	4.3 %	✓ 0.0427566	2.16	0.0000000	0.00	0.0485518	0.36	0.0000216	26.97	183.9084	0.36	0.0079912	2.16	0.0000000	0.00	4.225785	0.07	0.0025563	0.36	0.1443996	26.98	371.3344	0.07	0.1237704	0.36	33.89554	0.85	12.63457	2.16	0.0000000	0.00	0.3750477	0.07
15D10277	4.6 %	✓ 0.0351311	2.49	0.0000000	0.00	0.0460864	0.36	0.0000226	26.27	174.5698	0.36	0.0065660	2.49	0.0000000	0.00	4.035974	0.07	0.0024265	0.36	0.1505054	26.29	354.6551	0.07	0.1174855	0.36	32.76211	0.84	10.38123	2.49	0.0000000	0.00	0.3582016	0.07
15D10278	4.9 %	✓ 0.0459863	2.18	0.0000000	0.00	0.0567687	0.35	0.0000271	22.39	215.0328	0.35	0.0085948	2.18	0.0000000	0.00	5.421835	0.07	0.0029890	0.35	0.1807852	22.41	476.4354	0.07	0.1447171	0.35	43.19016	0.72	13.58896	2.18	0.0000000	0.00	0.4811998	0.07
15D10280	5.2 %	✓ 0.0233926	3.31	0.0000000	0.00	0.0278595	0.43	0.0000173	33.78	105.5285	0.43	0.0043721	3.31	0.0000000	0.00	2.952208	0.07	0.0014668	0.43	0.1153430	33.79	259.4208	0.07	0.0710207	0.43	23.40398	1.05	6.91251	3.31	0.0000000	0.00	0.2620150	0.07
15D10281	5.5 %	✓ 0.0312221	2.70	0.0000000	0.00	0.0279862	0.41	0.0000169	33.83	106.0083	0.41	0.0058354	2.70	0.0000000	0.00	3.363946	0.07	0.0014735	0.41	0.1130173	33.85	295.6016	0.07	0.0713436	0.41	26.77489	0.99	9.22612	2.70	0.0000000	0.00	0.2985576	0.07
15D10282	5.8 %	✓ 0.0240036	3.17	0.0000000	0.00	0.0180928	0.52	0.0000133	43.10	68.5335	0.52	0.0044863	3.17	0.0000000	0.00	2.358738	0.07	0.0009526	0.52	0.0884786	43.11	207.2704	0.07	0.0461230	0.52	18.50977	1.32	7.09307	3.17	0.0000000	0.00	0.2093431	0.07
15D10284	6.1 %	✓ 0.0201914	4.02	0.0000000	0.00	0.0141278	0.60	0.0000158	35.13	53.5145	0.60	0.0037738	4.02	0.0000000	0.00	1.921057	0.07	0.0007439	0.60	0.1054097	35.14	168.8099	0.07	0.0360152	0.60	15.46345	1.66	5.96655	4.02	0.0000000	0.00	0.1704980	0.07
15D10285	6.5 %	✓ 0.0186194	4.06	0.0000000	0.00	0.0102932	0.76	0.0000141	40.67	38.9893	0.76	0.0034800	4.06	0.0000000	0.00	1.432279	0.07	0.0005420	0.76	0.0937517	40.68	125.8593	0.07	0.0262398	0.76	11.34457	2.13	5.50203	4.06	0.0000000	0.00	0.1271179	0.07
15D10286	7.0 %	✓ 0.0178366	3.95	0.0000000	0.00	0.0093466	0.85	0.0000056	98.30	35.4040	0.85	0.0033337	3.95	0.0000000	0.00	1.283296	0.08	0.0004921	0.85	0.0375439	98.30	112.7676	0.08	0.0238269	0.85	10.28686	2.22	5.27071	3.95	0.0000000	0.00	0.1138953	0.08
15D10288	7.6 %	0.0257171	2.94	0.0000000	0.00	0.0107445	0.73	0.0000060	92.38	40.6988	0.73	0.0048065	2.94	0.0000000	0.00	1.462815	0.07	0.0005657	0.73	0.0398233	92.39	128.5427	0.07	0.0273903	0.73	11.37721	2.13	7.59939	2.94	0.0000000	0.00	0.1298281	0.07
15D10289	8.4 %	0.0316679	2.37	0.0000000	0.00	0.0117020	0.70	0.0000134	42.48	44.3257	0.70	0.0059187	2.37	0.0000000	0.00	1.508758	0.07	0.0006161	0.70	0.0890785	42.49	132.5798	0.07	0.0298312	0.70	11.75139	2.05	9.35786	2.37	0.0000000	0.00	0.1339056	0.07
15D10290	9.4 %	0.0447427	1.88	0.0000000	0.00	0.0144555	0.58	0.0000241	23.67	54.7556	0.58	0.0083624	1.88	0.0000000	0.00	1.720136	0.07	0.0007611	0.58	0.1605658	23.69	151.1543	0.07	0.0368505	0.58	12.83114	2.07	13.22146	1.88	0.0000000	0.00	0.1526659	0.07
15D10292	10.5 %	0.0523767	1.77	0.0000000	0.00	0.0174209	0.53	0.0000146	40.81	65.9883	0.53	0.0097892	1.77	0.0000000	0.00	1.918345	0.07	0.0009172	0.53	0.0971028	40.82	168.5717	0.07	0.0444101	0.53	15.06254	1.92	15.47731	1.77	0.0000000	0.00	0.1702574	0.07
15D10293	11.7 %	0.0561251	1.62	0.0000000	0.00	0.0173852	0.53	0.0000171	34.36	65.8530	0.53	0.0104898	1.62	0.0000000	0.00	1.733653	0.07	0.0009154	0.53	0.1136958	34.38	152.3421	0.07	0.0443191	0.53	13.53974	2.09	16.58497	1.62	0.0000000	0.00	0.1538655	0.07
15D10294	13.1 %	0.0699753	1.32	0.0000000	0.00	0.0188561	0.49	0.0000214	27																								



Additional Parameters		40Ar/39Ar	1σ	37Ar/39Ar	1σ	36Ar/39Ar	1σ	Time (days)	37Ar (decay)	39Ar (decay)	40Ar (moles)
15D10264	2.0 %	0.541745	0.003174	0.463131	0.009344	0.001629	0.000027	92.157	6.188866	1.00065135	7.906E-13
15D10266	2.2 %	0.407418	0.002105	0.450437	0.006047	0.001217	0.000018	92.176	6.191159	1.00065149	8.842E-13
15D10267	2.4 % ✓	0.333241	0.001883	0.444492	0.005242	0.000912	0.000015	92.185	6.192348	1.00065155	8.034E-13
15D10268	2.6 % ✓	0.265164	0.001073	0.439087	0.003506	0.000690	0.000009	92.196	6.193622	1.00065163	1.128E-12
15D10270	2.8 % ✓	0.231883	0.000960	0.437095	0.003138	0.000585	0.000009	92.214	6.195831	1.00065176	1.087E-12
15D10271	3.0 % ✓	0.191803	0.000506	0.433489	0.002069	0.000444	0.000005	92.224	6.197021	1.00065182	1.762E-12
15D10272	3.3 % ✓	0.168611	0.000443	0.443673	0.001949	0.000372	0.000004	92.233	6.198212	1.00065189	1.755E-12
15D10273	3.6 % ✓	0.149397	0.000276	0.467170	0.001739	0.000314	0.000003	92.243	6.199402	1.00065196	2.622E-12
15D10275	3.9 % ✓	0.134396	0.000253	0.492140	0.001771	0.000270	0.000003	92.261	6.201613	1.00065209	2.569E-12
15D10276	4.3 % ✓	0.126273	0.000265	0.495099	0.001815	0.000246	0.000002	92.270	6.202719	1.00065215	2.251E-12
15D10277	4.6 % ✓	0.122618	0.000274	0.492061	0.001816	0.000229	0.000002	92.279	6.203825	1.00065222	2.088E-12
15D10278	4.9 % ✓	0.120148	0.000211	0.451200	0.001625	0.000216	0.000002	92.287	6.204847	1.00065228	2.748E-12
15D10280	5.2 % ✓	0.117840	0.000366	0.406674	0.001751	0.000198	0.000003	92.305	6.206975	1.00065240	1.468E-12
15D10281	5.5 % ✓	0.122769	0.000323	0.358532	0.001494	0.000200	0.000003	92.314	6.208082	1.00065246	1.742E-12
15D10282	5.8 % ✓	0.124506	0.000457	0.330574	0.001749	0.000203	0.000004	92.322	6.209103	1.00065252	1.239E-12
15D10284	6.1 % ✓	0.127930	0.000561	0.316943	0.001920	0.000203	0.000005	92.340	6.211233	1.00065264	1.037E-12
15D10285	6.5 % ✓	0.134835	0.000741	0.309720	0.002362	0.000230	0.000006	92.349	6.212341	1.00065271	8.147E-13
15D10286	7.0 % ✓	0.138942	0.000828	0.313889	0.002684	0.000241	0.000006	92.357	6.213363	1.00065277	7.522E-13
15D10288	7.6 %	0.148607	0.000729	0.316549	0.002317	0.000284	0.000006	92.374	6.215494	1.00065289	9.171E-13
15D10289	8.4 %	0.160193	0.000706	0.334257	0.002339	0.000327	0.000006	92.383	6.216603	1.00065295	1.020E-12
15D10290	9.4 %	0.173325	0.000631	0.362162	0.002127	0.000392	0.000006	92.392	6.217626	1.00065301	1.258E-12
15D10292	10.5 %	0.182130	0.000567	0.391352	0.002104	0.000414	0.000005	92.409	6.219759	1.00065313	1.474E-12
15D10293	11.7 %	0.198696	0.000625	0.432145	0.002310	0.000483	0.000006	92.418	6.220868	1.00065320	1.453E-12
15D10294	13.1 %	0.230831	0.000671	0.491975	0.002455	0.000612	0.000006	92.426	6.221892	1.00065326	1.609E-12
15D10296	14.7 %	0.273533	0.000689	0.633354	0.002939	0.000817	0.000007	92.444	6.224026	1.00065338	1.849E-12
15D10297	16.5 %	0.354461	0.000775	1.355795	0.005052	0.001279	0.000009	92.453	6.225136	1.00065344	2.171E-12
15D10298	18.5 %	0.546120	0.001499	2.331664	0.008941	0.002198	0.000017	92.462	6.226246	1.00065351	1.755E-12
15D10300	19.8 %	0.714076	0.002812	3.123198	0.013802	0.002909	0.000030	92.479	6.228381	1.00065363	1.207E-12
15D10301	21.7 %	0.905941	0.004459	4.707372	0.022078	0.004015	0.000042	92.488	6.229492	1.00065369	1.002E-12
15D10302	22.8 %	1.030206	0.006646	5.101941	0.027664	0.004575	0.000058	92.497	6.230603	1.00065376	7.635E-13
15D10304	24.3 %	1.170808	0.008216	6.559133	0.036958	0.005388	0.000071	92.515	6.232825	1.00065388	7.206E-13



Procedure Blanks		36Ar [fA]	1σ	37Ar [fA]	1σ	38Ar [fA]	1σ	39Ar [fA]	1σ	40Ar [fA]	1σ
15D10264	2.0 %	0.0100984	0.0004494	0.0040380	0.0300591	0.0191666	0.0262862	0.0084255	0.0343460	3.0506843	0.0879493
15D10266	2.2 %	0.0101154	0.0004494	0.0078157	0.0300591	0.0206868	0.0262862	0.0107921	0.0343460	3.0432068	0.0879493
15D10267	2.4 %	0.0101241	0.0004494	0.0096118	0.0300591	0.0214750	0.0262862	0.0120192	0.0343460	3.0399749	0.0879493
15D10268	2.6 %	0.0101336	0.0004494	0.0114129	0.0300591	0.0223195	0.0262862	0.0133340	0.0343460	3.0370010	0.0879493
15D10270	2.8 %	0.0101499	0.0004494	0.0142326	0.0300591	0.0237834	0.0262862	0.0156130	0.0343460	3.0330447	0.0879493
15D10271	3.0 %	0.0101586	0.0004494	0.0155922	0.0300591	0.0245716	0.0262862	0.0168401	0.0343460	3.0315438	0.0879493
15D10272	3.3 %	0.0101674	0.0004494	0.0168406	0.0300591	0.0253598	0.0262862	0.0180672	0.0343460	3.0304837	0.0879493
15D10273	3.6 %	0.0101762	0.0004494	0.0179779	0.0300591	0.0261480	0.0262862	0.0192944	0.0343460	3.0298641	0.0879493
15D10275	3.9 %	0.0101925	0.0004494	0.0197952	0.0300591	0.0276119	0.0262862	0.0215733	0.0343460	3.0298827	0.0879493
15D10276	4.3 %	0.0102007	0.0004494	0.0205602	0.0300591	0.0283438	0.0262862	0.0227128	0.0343460	3.0304619	0.0879493
15D10277	4.6 %	0.0102088	0.0004494	0.0212293	0.0300591	0.0290757	0.0262862	0.0238523	0.0343460	3.0314210	0.0879493
15D10278	4.9 %	0.0102164	0.0004494	0.0217619	0.0300591	0.0297513	0.0262862	0.0249041	0.0343460	3.0326436	0.0879493
15D10280	5.2 %	0.0102321	0.0004494	0.0226093	0.0300591	0.0311589	0.0262862	0.0270955	0.0343460	3.0362305	0.0879493
15D10281	5.5 %	0.0102402	0.0004494	0.0229099	0.0300591	0.0318908	0.0262862	0.0282349	0.0343460	3.0386510	0.0879493
15D10282	5.8 %	0.0102477	0.0004494	0.0231023	0.0300591	0.0325664	0.0262862	0.0292868	0.0343460	3.0412226	0.0879493
15D10284	6.1 %	0.0102634	0.0004494	0.0232411	0.0300591	0.0339739	0.0262862	0.0314781	0.0343460	3.0476198	0.0879493
15D10285	6.5 %	0.0102716	0.0004494	0.0231732	0.0300591	0.0347058	0.0262862	0.0326176	0.0343460	3.0515016	0.0879493
15D10286	7.0 %	0.0102791	0.0004494	0.0230254	0.0300591	0.0353815	0.0262862	0.0336694	0.0343460	3.0554221	0.0879493
15D10288	7.6 %	0.0102948	0.0004494	0.0224555	0.0300591	0.0367890	0.0262862	0.0358607	0.0343460	3.0646296	0.0879493
15D10289	8.4 %	0.0103030	0.0004494	0.0220190	0.0300591	0.0375209	0.0262862	0.0370002	0.0343460	3.0699728	0.0879493
15D10290	9.4 %	0.0103105	0.0004494	0.0215312	0.0300591	0.0381965	0.0262862	0.0380520	0.0343460	3.0752422	0.0879493
15D10292	10.5 %	0.0103262	0.0004494	0.0202525	0.0300591	0.0396041	0.0262862	0.0402433	0.0343460	3.0872600	0.0879493
15D10293	11.7 %	0.0103343	0.0004494	0.0194476	0.0300591	0.0403360	0.0262862	0.0413828	0.0343460	3.0940646	0.0879493
15D10294	13.1 %	0.0103419	0.0004494	0.0186195	0.0300591	0.0410116	0.0262862	0.0424346	0.0343460	3.1006830	0.0879493
15D10296	14.7 %	0.0103575	0.0004494	0.0166322	0.0300591	0.0424192	0.0262862	0.0446260	0.0343460	3.1155110	0.0879493
15D10297	16.5 %	0.0103657	0.0004494	0.0154587	0.0300591	0.0431511	0.0262862	0.0457654	0.0343460	3.1237770	0.0879493
15D10298	18.5 %	0.0103739	0.0004494	0.0141894	0.0300591	0.0438830	0.0262862	0.0469049	0.0343460	3.1324228	0.0879493
15D10300	19.8 %	0.0103895	0.0004494	0.0114792	0.0300591	0.0452905	0.0262862	0.0490962	0.0343460	3.1501174	0.0879493
15D10301	21.7 %	0.0103977	0.0004494	0.0099299	0.0300591	0.0460224	0.0262862	0.0502357	0.0343460	3.1598739	0.0879493
15D10302	22.8 %	0.0104059	0.0004494	0.0082848	0.0300591	0.0467544	0.0262862	0.0513752	0.0343460	3.1700104	0.0879493
15D10304	24.3 %	0.0104222	0.0004494	0.0047070	0.0300591	0.0482182	0.0262862	0.0536542	0.0343460	3.1914231	0.0879493



OSU Argon Geochronology Lab																									
Intercept Values	36Ar					37Ar					38Ar					39Ar					40Ar				
	[fA]	1σ	r2			[fA]	1σ	r2			[fA]	1σ	r2			[fA]	1σ	r2			[fA]	1σ	r2		
15D10264	2.0 %	0.0565834	0.0006072	0.1353	EXP 150 of 150	2.2350	0.0325	0.1607	EXP 149 of 150	0.2946155	0.0276507	0.0008	EXP 150 of 150	30.1950	0.0268	0.9816	EXP 150 of 150	19.56964	0.03076	0.9916	EXP 150 of 150				
15D10266	2.2 %	0.0617912	0.0005938	0.0278	EXP 150 of 150	3.2335	0.0291	0.2751	EXP 150 of 150	0.4879361	0.0257510	0.0017	EXP 150 of 150	44.9029	0.0278	0.9911	EXP 150 of 150	21.51819	0.03006	0.9912	EXP 149 of 150				
15D10267	2.4 %	0.0531109	0.0005461	0.2078	EXP 150 of 150	3.5448	0.0262	0.4137	EXP 150 of 150	0.5113514	0.0276111	0.0003	EXP 150 of 150	49.8791	0.0265	0.9936	EXP 150 of 150	19.82595	0.03054	0.9914	EXP 150 of 150				
15D10268	2.6 %	0.0675098	0.0005525	0.1156	EXP 150 of 150	6.1725	0.0329	0.5105	EXP 150 of 150	0.9961150	0.0275098	0.0423	EXP 149 of 150	88.0098	0.0351	0.9965	EXP 150 of 150	26.60663	0.03092	0.9905	EXP 150 of 150				
15D10270	2.8 %	0.0637392	0.0006181	0.1231	EXP 150 of 150	6.7691	0.0305	0.6193	EXP 150 of 150	1.0763561	0.0290724	0.0193	EXP 150 of 150	96.9671	0.0320	0.9976	EXP 150 of 150	25.74201	0.02784	0.9924	EXP 150 of 150				
15D10271	3.0 %	0.0898839	0.0007532	0.0498	EXP 150 of 150	13.1458	0.0331	0.8360	EXP 150 of 150	2.1352340	0.0248023	0.1313	EXP 150 of 150	190.0772	0.0405	0.9990	EXP 150 of 150	39.85466	0.03232	0.9881	EXP 150 of 150				
15D10272	3.3 %	0.0858609	0.0006248	0.0783	EXP 150 of 150	15.2376	0.0314	0.8903	EXP 150 of 150	2.5119312	0.0255440	0.3263	EXP 150 of 150	215.3237	0.0424	0.9991	EXP 150 of 150	39.70087	0.02979	0.9907	EXP 150 of 150				
15D10273	3.6 %	0.1177992	0.0008737	0.0426	EXP 150 of 150	27.0360	0.0331	0.9566	EXP 150 of 150	4.2015761	0.0301537	0.3581	EXP 150 of 150	363.0499	0.0464	0.9996	EXP 150 of 150	57.81439	0.03451	0.9874	EXP 150 of 150				
15D10275	3.9 %	0.1110760	0.0007922	0.0844	EXP 149 of 150	31.0107	0.0294	0.9731	EXP 149 of 150	4.6483654	0.0277157	0.5250	EXP 150 of 150	395.4482	0.0498	0.9996	EXP 150 of 150	56.71154	0.03471	0.9884	EXP 150 of 150				
15D10276	4.3 %	0.0959419	0.0006817	0.1825	EXP 150 of 150	29.0944	0.0326	0.9596	EXP 150 of 150	4.2955945	0.0272967	0.4162	EXP 150 of 150	368.8367	0.0462	0.9996	EXP 150 of 150	50.07312	0.03164	0.9915	EXP 150 of 150				
15D10277	4.6 %	0.0864775	0.0006328	0.3379	EXP 150 of 150	27.6138	0.0317	0.9598	EXP 150 of 150	4.1120042	0.0281742	0.4208	EXP 150 of 150	352.2710	0.0481	0.9996	EXP 150 of 150	46.66048	0.03045	0.9928	EXP 150 of 150				
15D10278	4.9 %	0.1067088	0.0007623	0.2383	EXP 150 of 150	34.0043	0.0352	0.9681	EXP 150 of 150	5.5116672	0.0289559	0.5652	EXP 150 of 150	473.2125	0.0524	0.9997	EXP 150 of 150	60.46082	0.03210	0.9920	EXP 150 of 150				
15D10280	5.2 %	0.0583641	0.0005427	0.4330	EXP 150 of 150	16.6940	0.0340	0.8822	EXP 150 of 150	3.0023860	0.0277016	0.2876	EXP 150 of 150	257.6716	0.0458	0.9993	EXP 150 of 150	33.70438	0.03018	0.9931	EXP 150 of 150				
15D10281	5.5 %	0.0658412	0.0006230	0.2997	EXP 150 of 150	16.7671	0.0291	0.9085	EXP 150 of 150	3.4072092	0.0265924	0.3427	EXP 150 of 150	293.5963	0.0456	0.9995	EXP 150 of 150	39.44463	0.02838	0.9937	EXP 150 of 150				
15D10282	5.8 %	0.0497806	0.0005370	0.4025	EXP 150 of 150	10.8463	0.0327	0.7492	EXP 149 of 150	2.3882911	0.0266916	0.2000	EXP 150 of 150	205.8700	0.0405	0.9991	EXP 150 of 150	28.92908	0.03116	0.9927	EXP 150 of 150				
15D10284	6.1 %	0.0424973	0.0006023	0.4056	EXP 150 of 150	8.4717	0.0303	0.7349	EXP 150 of 150	1.9706793	0.0252091	0.1837	EXP 150 of 150	167.6754	0.0366	0.9989	EXP 150 of 150	24.71143	0.03237	0.9917	EXP 150 of 150				
15D10285	6.5 %	0.0374281	0.0005389	0.4146	EXP 150 of 150	6.1774	0.0295	0.6017	EXP 149 of 150	1.4755099	0.0268280	0.0666	EXP 150 of 150	125.0220	0.0322	0.9985	EXP 150 of 150	20.07498	0.02941	0.9932	EXP 150 of 150				
15D10286	7.0 %	0.0358042	0.0004740	0.4890	EXP 150 of 150	5.6104	0.0320	0.5036	EXP 150 of 150	1.2721102	0.0251360	0.0425	EXP 150 of 150	112.0222	0.0330	0.9980	EXP 150 of 150	18.77282	0.02976	0.9929	EXP 150 of 150				
15D10288	7.6 %	0.0445307	0.0005373	0.3135	EXP 150 of 150	6.4432	0.0290	0.6161	EXP 149 of 150	1.4516712	0.0249512	0.0386	EXP 150 of 150	127.6906	0.0338	0.9984	EXP 150 of 150	22.22707	0.02983	0.9917	EXP 150 of 150				
15D10289	8.4 %	0.0510314	0.0005255	0.3315	EXP 150 of 150	7.0138	0.0307	0.6403	EXP 149 of 150	1.5460503	0.0264119	0.0987	EXP 148 of 150	131.7025	0.0342	0.9985	EXP 150 of 150	24.37540	0.02873	0.9925	EXP 150 of 150				
15D10290	9.4 %	0.0659087	0.0006252	0.0281	EXP 150 of 150	8.6570	0.0288	0.7337	EXP 150 of 150	1.8271284	0.0265781	0.1709	EXP 150 of 150	150.1529	0.0410	0.9983	EXP 150 of 150	29.35733	0.03247	0.9894	EXP 150 of 150				
15D10292	10.5 %	0.0758662	0.0007190	0.1125	EXP 150 of 150	10.4237	0.0318	0.7706	EXP 150 of 150	1.9602824	0.0288001	0.1072	EXP 150 of 150	167.4559	0.0348	0.9990	EXP 150 of 150	33.88740	0.03154	0.9881	EXP 150 of 150				
15D10293	11.7 %	0.0793623	0.0006918	0.0491	EXP 150 of 150	10.3997	0.0311	0.8099	EXP 150 of 150	1.7943201	0.0280671	0.0663	EXP 150 of 150	151.3429	0.0320	0.9990	EXP 150 of 150	33.46141	0.03005	0.9883	EXP 150 of 150				
15D10294	13.1 %	0.0937573	0.0006983	0.0004	EXP 150 of 150	11.2752	0.0288	0.8414	EXP 150 of 150	1.7436295	0.0286108	0.1015	EXP 150 of 150	144.1880	0.0353	0.9986	EXP 150 of 150	36.71079	0.03461	0.9819	EXP 150 of 150				
15D10296	14.7 %	0.1183507	0.0007762	0.1138	EXP 150 of 150	14.0694	0.0336	0.8460	EXP 150 of 150	1.7224014	0.0293840	0.1489	EXP 150 of 150	139.8749	0.0343	0.9986	EXP 150 of 150	41.75084	0.03037	0.9823	EXP 150 of 150				
15D10297	16.5 %	0.1635418	0.0009245	0.2750	EXP 150 of 150	27.2645	0.0320	0.9566	EXP 150 of 150	1.6022464	0.0245159	0.1522	EXP 150 of 150	126.7295	0.0386	0.9978	EXP 150 of 150	48.48283	0.02983	0.9775	EXP 150 of 150				
15D10298	18.5 %	0.1485371	0.0009055	0.2221	EXP 150 of 150	24.6017	0.0313	0.9503	EXP 149 of 150	0.8989182	0.0249560	0.1066	EXP 150 of 150	66.5267	0.0302	0.9952	EXP 150 of 150	39.80593	0.03460	0.9730	EXP 149 of 150				
15D10300	19.8 %	0.1066076	0.0008475	0.0145	EXP 150 of 150	17.3336	0.0337	0.8969	EXP 150 of 150	0.4448417	0.0257059	0.0063	EXP 150 of 150	35.0269	0.0279	0.9847	EXP 150 of 150	28.37976	0.02920	0.9844	EXP 150 of 150				
15D10301	21.7 %	0.0972693	0.0007415	0.0272	EXP 150 of 150	17.0859	0.0336	0.8993	EXP 150 of 150	0.2953580	0.0297751	0.0039	EXP 150 of 150	22.9312	0.0294	0.9602	EXP 150 of 150	24.09849	0.03148	0.9843	EXP 150 of 150				
15D10302	22.8 %	0.0767205	0.0006652	0.0151	EXP 150 of 150	12.4060	0.0264	0.8702	EXP 149 of 150	0.1457785	0.0239789	0.0006	EXP 150 of 150	15.3817	0.0259	0.9303	EXP 150 of 150	19.12331	0.02731	0.9896	EXP 149 of 150				
15D10304	24.3 %	0.0752793	0.0006685	0.0000	EXP 150 of 150	13.2363	0.0278	0.8744	EXP 150 of 150	0.1944092	0.0282765	0.0222	EXP 150 of 150	12.7848	0.0247	0.9032	EXP 149 of 150	18.24802	0.02885	0.9878	EXP 150 of 150				



OSU Argon Geochronology Lab																														
Sample Parameters		Sample	Material	Location	Analyst	Temp	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	Irradiation	X-pos	Y-pos	Z/H-pos
15D10264	2.0 %	154-1	Groundmass	Kerguelen Plateau	Dan Miggins	2	FCT-NM (7B26-14)	28.201	0.082	Kuiper et al (2008)	8.95301	0.115	0.00175554	0.115	303.357	0.116	0.993516587	0.065	1	4.8E-14	2	APR	2015	18	52	1	14-OSU-07	0.00	0.00	37.15
15D10266	2.2 %	154-1	Groundmass	Kerguelen Plateau	Dan Miggins	2.2	FCT-NM (7B26-14)	28.201	0.082	Kuiper et al (2008)	8.95301	0.115	0.00175554	0.115	303.357	0.116	0.993516587	0.065	1	4.8E-14	2	APR	2015	19	19	1	14-OSU-07	0.00	0.00	37.15
15D10267	2.4 %	154-1	Groundmass	Kerguelen Plateau	Dan Miggins	2.4	FCT-NM (7B26-14)	28.201	0.082	Kuiper et al (2008)	8.95301	0.115	0.00175554	0.115	303.357	0.116	0.993516587	0.065	1	4.8E-14	2	APR	2015	19	33	1	14-OSU-07	0.00	0.00	37.15
15D10268	2.6 %	154-1	Groundmass	Kerguelen Plateau	Dan Miggins	2.6	FCT-NM (7B26-14)	28.201	0.082	Kuiper et al (2008)	8.95301	0.115	0.00175554	0.115	303.357	0.116	0.993516587	0.065	1	4.8E-14	2	APR	2015	19	48	1	14-OSU-07	0.00	0.00	37.15
15D10270	2.8 %	154-1	Groundmass	Kerguelen Plateau	Dan Miggins	2.8	FCT-NM (7B26-14)	28.201	0.082	Kuiper et al (2008)	8.95301	0.115	0.00175554	0.115	303.357	0.116	0.993516587	0.065	1	4.8E-14	2	APR	2015	20	14	1	14-OSU-07	0.00	0.00	37.15
15D10271	3.0 %	154-1	Groundmass	Kerguelen Plateau	Dan Miggins	3	FCT-NM (7B26-14)	28.201	0.082	Kuiper et al (2008)	8.95301	0.115	0.00175554	0.115	303.357	0.116	0.993516587	0.065	1	4.8E-14	2	APR	2015	20	28	1	14-OSU-07	0.00	0.00	37.15
15D10272	3.3 %	154-1	Groundmass	Kerguelen Plateau	Dan Miggins	3.3	FCT-NM (7B26-14)	28.201	0.082	Kuiper et al (2008)	8.95301	0.115	0.00175554	0.115	303.357	0.116	0.993516587	0.065	1	4.8E-14	2	APR	2015	20	42	1	14-OSU-07	0.00	0.00	37.15
15D10273	3.6 %	154-1	Groundmass	Kerguelen Plateau	Dan Miggins	3.6	FCT-NM (7B26-14)	28.201	0.082	Kuiper et al (2008)	8.95301	0.115	0.00175554	0.115	303.357	0.116	0.993516587	0.065	1	4.8E-14	2	APR	2015	20	56	1	14-OSU-07	0.00	0.00	37.15
15D10275	3.9 %	154-1	Groundmass	Kerguelen Plateau	Dan Miggins	3.9	FCT-NM (7B26-14)	28.201	0.082	Kuiper et al (2008)	8.95301	0.115	0.00175554	0.115	303.357	0.116	0.993516587	0.065	1	4.8E-14	2	APR	2015	21	22	1	14-OSU-07	0.00	0.00	37.15
15D10276	4.3 %	154-1	Groundmass	Kerguelen Plateau	Dan Miggins	4.3	FCT-NM (7B26-14)	28.201	0.082	Kuiper et al (2008)	8.95301	0.115	0.00175554	0.115	303.357	0.116	0.993516587	0.065	1	4.8E-14	2	APR	2015	21	35	1	14-OSU-07	0.00	0.00	37.15
15D10277	4.6 %	154-1	Groundmass	Kerguelen Plateau	Dan Miggins	4.6	FCT-NM (7B26-14)	28.201	0.082	Kuiper et al (2008)	8.95301	0.115	0.00175554	0.115	303.357	0.116	0.993516587	0.065	1	4.8E-14	2	APR	2015	21	48	1	14-OSU-07	0.00	0.00	37.15
15D10278	4.9 %	154-1	Groundmass	Kerguelen Plateau	Dan Miggins	4.9	FCT-NM (7B26-14)	28.201	0.082	Kuiper et al (2008)	8.95301	0.115	0.00175554	0.115	303.357	0.116	0.993516587	0.065	1	4.8E-14	2	APR	2015	22	0	1	14-OSU-07	0.00	0.00	37.15
15D10280	5.2 %	154-1	Groundmass	Kerguelen Plateau	Dan Miggins	5.2	FCT-NM (7B26-14)	28.201	0.082	Kuiper et al (2008)	8.95301	0.115	0.00175554	0.115	303.357	0.116	0.993516587	0.065	1	4.8E-14	2	APR	2015	22	25	1	14-OSU-07	0.00	0.00	37.15
15D10281	5.5 %	154-1	Groundmass	Kerguelen Plateau	Dan Miggins	5.5	FCT-NM (7B26-14)	28.201	0.082	Kuiper et al (2008)	8.95301	0.115	0.00175554	0.115	303.357	0.116	0.993516587	0.065	1	4.8E-14	2	APR	2015	22	38	1	14-OSU-07	0.00	0.00	37.15
15D10282	5.8 %	154-1	Groundmass	Kerguelen Plateau	Dan Miggins	5.8	FCT-NM (7B26-14)	28.201	0.082	Kuiper et al (2008)	8.95301	0.115	0.00175554	0.115	303.357	0.116	0.993516587	0.065	1	4.8E-14	2	APR	2015	22	50	1	14-OSU-07	0.00	0.00	37.15
15D10284	6.1 %	154-1	Groundmass	Kerguelen Plateau	Dan Miggins	6.1	FCT-NM (7B26-14)	28.201	0.082	Kuiper et al (2008)	8.95301	0.115	0.00175554	0.115	303.357	0.116	0.993516587	0.065	1	4.8E-14	2	APR	2015	23	15	1	14-OSU-07	0.00	0.00	37.15
15D10285	6.5 %	154-1	Groundmass	Kerguelen Plateau	Dan Miggins	6.5	FCT-NM (7B26-14)	28.201	0.082	Kuiper et al (2008)	8.95301	0.115	0.00175554	0.115	303.357	0.116	0.993516587	0.065	1	4.8E-14	2	APR	2015	23	28	1	14-OSU-07	0.00	0.00	37.15
15D10286	7.0 %	154-1	Groundmass	Kerguelen Plateau	Dan Miggins	7	FCT-NM (7B26-14)	28.201	0.082	Kuiper et al (2008)	8.95301	0.115	0.00175554	0.115	303.357	0.116	0.993516587	0.065	1	4.8E-14	2	APR	2015	23	40	1	14-OSU-07	0.00	0.00	37.15
15D10288	7.6 %	154-1	Groundmass	Kerguelen Plateau	Dan Miggins	7.6	FCT-NM (7B26-14)	28.201	0.082	Kuiper et al (2008)	8.95301	0.115	0.00175554	0.115	303.357	0.116	0.993516587	0.065	1	4.8E-14	3	APR	2015	0	5	1	14-OSU-07	0.00	0.00	37.15
15D10289	8.4 %	154-1	Groundmass	Kerguelen Plateau	Dan Miggins	8.4	FCT-NM (7B26-14)	28.201	0.082	Kuiper et al (2008)	8.95301	0.115	0.00175554	0.115	303.357	0.116	0.993516587	0.065	1	4.8E-14	3	APR	2015	0	18	1	14-OSU-07	0.00	0.00	37.15
15D10290	9.4 %	154-1	Groundmass	Kerguelen Plateau	Dan Miggins	9.4	FCT-NM (7B26-14)	28.201	0.082	Kuiper et al (2008)	8.95301	0.115	0.00175554	0.115	303.357	0.116	0.993516587	0.065	1	4.8E-14	3	APR	2015	0	30	1	14-OSU-07	0.00	0.00	37.15
15D10292	10.5 %	154-1	Groundmass	Kerguelen Plateau	Dan Miggins	10.5	FCT-NM (7B26-14)	28.201	0.082	Kuiper et al (2008)	8.95301	0.115	0.00175554	0.115	303.357	0.116	0.993516587	0.065	1	4.8E-14	3	APR	2015	0	55	1	14-OSU-07	0.00	0.00	37.15
15D10293	11.7 %	154-1	Groundmass	Kerguelen Plateau	Dan Miggins	11.7	FCT-NM (7B26-14)	28.201	0.082	Kuiper et al (2008)	8.95301	0.115	0.00175554	0.115	303.357	0.116	0.993516587	0.065	1	4.8E-14	3	APR	2015	1	8	1	14-OSU-07	0.00	0.00	37.15
15D10294	13.1 %	154-1	Groundmass	Kerguelen Plateau	Dan Miggins	13.1	FCT-NM (7B26-14)	28.201	0.082	Kuiper et al (2008)	8.95301	0.115	0.00175554	0.115	303.357	0.116	0.993516587	0.065	1	4.8E-14	3	APR	2015	1	20	1	14-OSU-07	0.00	0.00	37.15
15D10296	14.7 %	154-1	Groundmass	Kerguelen Plateau	Dan Miggins	14.7	FCT-NM (7B26-14)	28.201	0.082	Kuiper et al (2008)	8.95301	0.115	0.00175554	0.115	303.357	0.116	0.993516587	0.065	1	4.8E-14	3	APR	2015	1	45	1	14-OSU-07	0.00	0.00	37.15
15D10297	16.5 %	154-1	Groundmass	Kerguelen Plateau	Dan Miggins	16.5	FCT-NM (7B26-14)	28.201	0.082	Kuiper et al (2008)	8.95301	0.115	0.00175554	0.115	303.357	0.116	0.993516587	0.065	1	4.8E-14	3	APR	2015	1	58	1	14-OSU-07	0.00	0.00	37.15
15D10298	18.5 %	154-1	Groundmass	Kerguelen Plateau	Dan Miggins	18.5	FCT-NM (7B26-14)	28.201	0.082	Kuiper et al (2008)	8.95301	0.115	0.00175554	0.115	303.357	0.116	0.993516587	0.065	1	4.8E-14	3	APR	2015	2	11	1	14-OSU-07	0.00	0.00	37.15
15D10300	19.8 %	154-1	Groundmass	Kerguelen Plateau	Dan Miggins	19.8	FCT-NM (7B26-14)	28.201	0.082	Kuiper et al (2008)	8.95301	0.115	0.00175554	0.115	303.357	0.116	0.993516587	0.065	1	4.8E-14	3	APR	2015	2	36	1	14-OSU-07	0.00	0.00	37.15
15D10301	21.7 %	154-1	Groundmass	Kerguelen Plateau	Dan Miggins	21.7	FCT-NM (7B26-14)	28.201	0.082	Kuiper et al (2008)	8.95301	0.115	0.00175554	0.115	303.357	0.116	0.993516587	0.065	1	4.8E-14	3	APR	2015	2	49	1	14-OSU-07	0.00	0.00	37.15
15D10302	22.8 %	154-1	Groundmass	Kerguelen Plateau	Dan Miggins	22.8	FCT-NM (7B26-14)	28.201	0.082	Kuiper et al (2008)	8.95301	0.115	0.00175554	0.115	303.357	0.116	0.993516587	0.065	1	4.8E-14	3	APR	2015	3	2	1	14-OSU-07	0.00	0.00	37.15
15D10304	24.3 %	154-1	Groundmass	Kerguelen Plateau	Dan Miggins	24.3	FCT-NM (7B26-14)	28.201	0.082	Kuiper et al (2008)	8.95301	0.115	0.00175554	0.115	303.357	0.116	0.993516587	0.065	1	4.8E-14	3	APR	2015	3	28	1	14-OSU-07	0.00	0.00	37.15



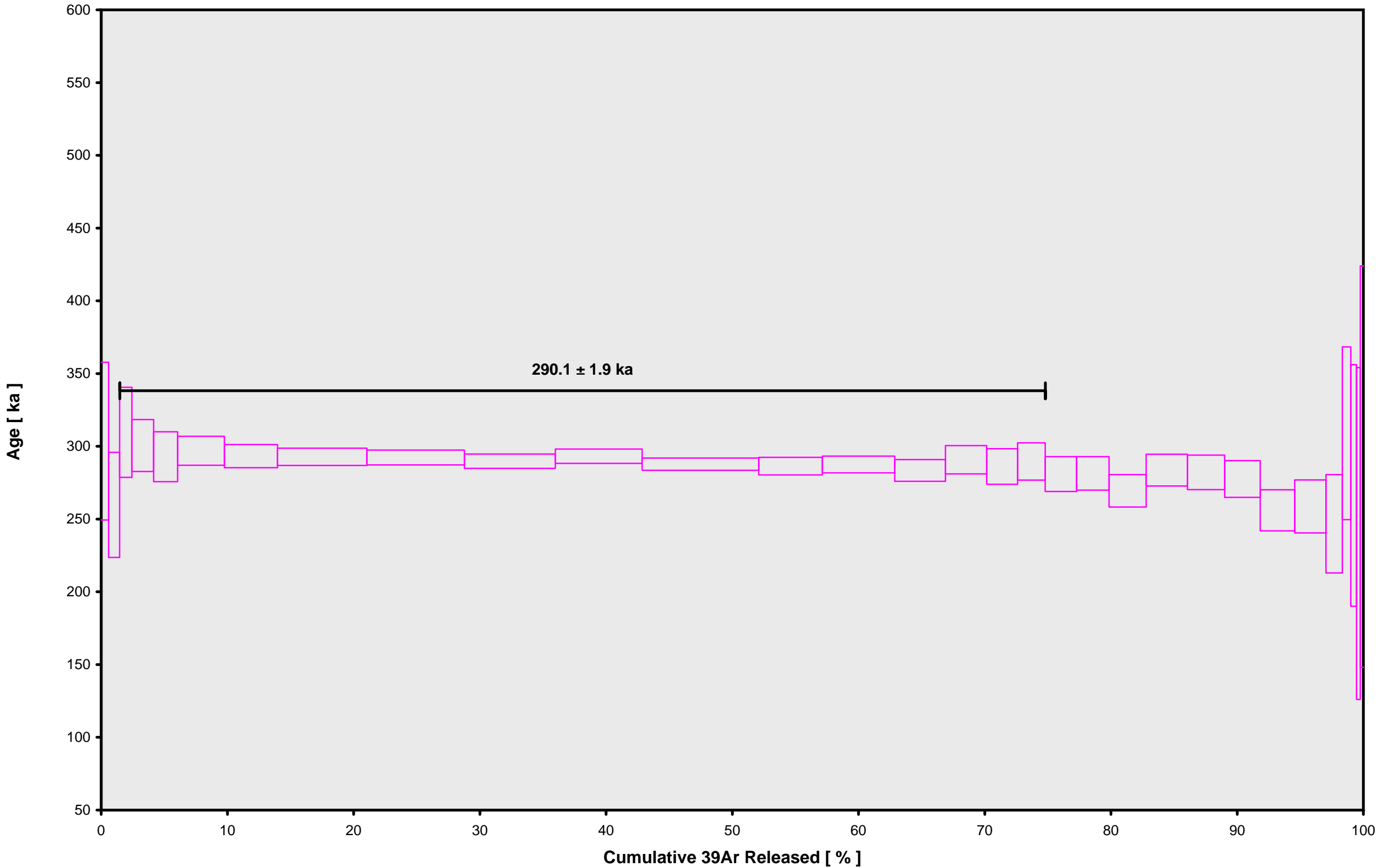
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OSU Argon Geochronology Lab																											
Irradiation Constants																											
	40/36(a)	%1σ	40/36(c)	%1σ	38/36(a)	%1σ	38/36(c)	%1σ	39/37(ca)	%1σ	38/37(ca)	%1σ	36/37(ca)	%1σ	40/39(k)	%1σ	38/39(k)	%1σ	36/38(cl)	%1σ	K/Ca	%1σ	K/Cl	%1σ	Ca/Cl	%1σ	
15D10264	2.0 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D10266	2.2 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D10267	2.4 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D10268	2.6 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D10270	2.8 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D10271	3.0 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D10272	3.3 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D10273	3.6 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D10275	3.9 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D10276	4.3 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D10277	4.6 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D10278	4.9 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D10280	5.2 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D10281	5.5 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D10282	5.8 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D10284	6.1 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D10285	6.5 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D10286	7.0 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D10288	7.6 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D10289	8.4 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D10290	9.4 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D10292	10.5 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D10293	11.7 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D10294	13.1 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D10296	14.7 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D10297	16.5 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D10298	18.5 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D10300	19.8 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D10301	21.7 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D10302	22.8 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D10304	24.3 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0



15D10263.AGE >>> 154-1 >>> KERGUELEN | FALLOON (14-PIL-01) PROJECT



Ar-Ages in ka

WEIGHTED PLATEAU

290.1 ± 1.9

TOTAL FUSION

286.1 ± 2.0

NORMAL ISOCHRON

285.9 ± 3.5

INVERSE ISOCHRON

286.2 ± 3.5

MSWD (PROBABILITY)

1.07 (38%)

Sample Info

Groundmass

Kerguelen Plateau

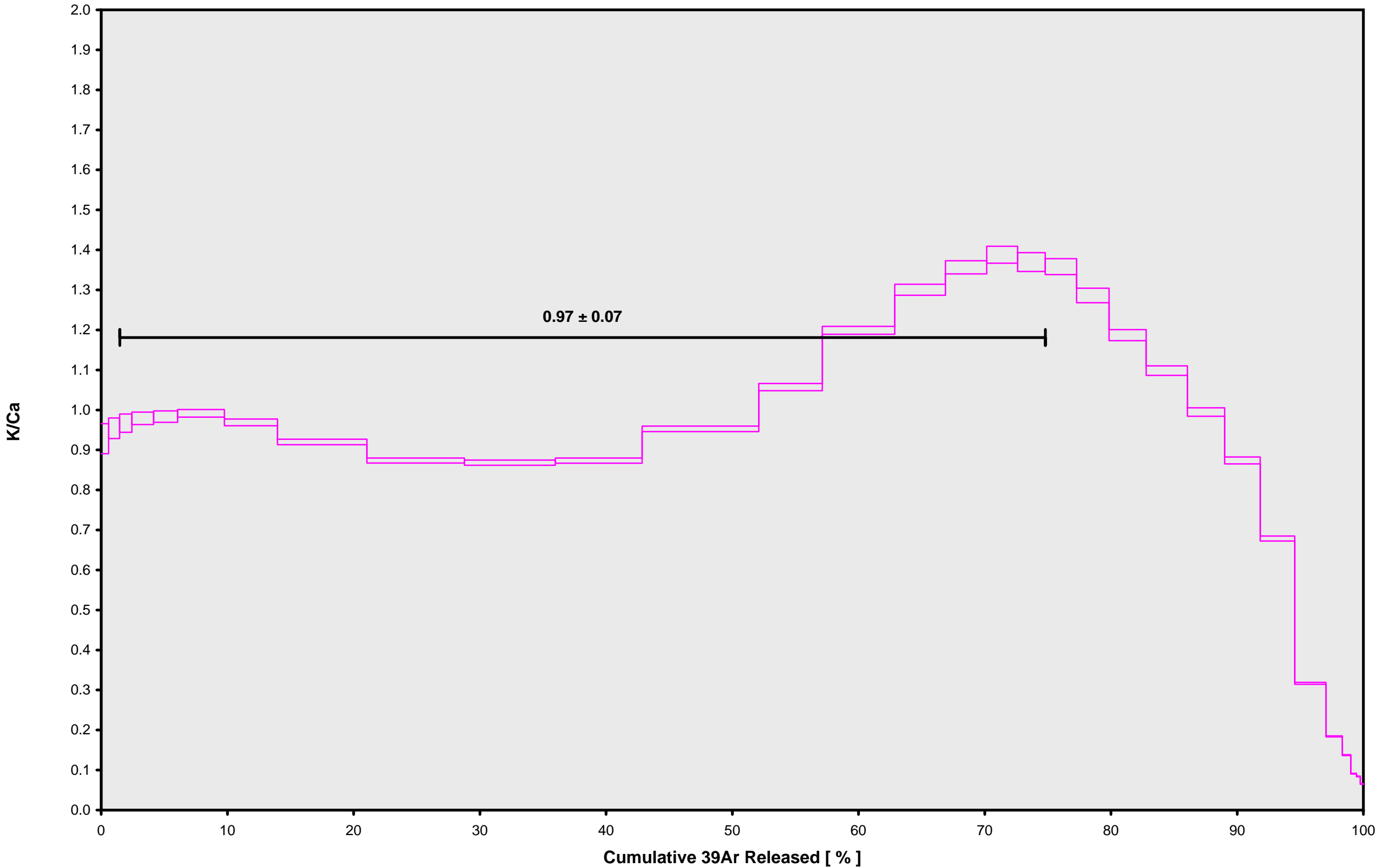
Dan Miggins

IRR = 14-OSU-07 (7B26-14)

J = 0.00175554 ± 0.00000202



15D10263.AGE >>> 154-1 >>> KERGUELEN | FALLOON (14-PIL-01) PROJECT



Ar-Ages in ka

WEIGHTED PLATEAU

$290.1 \pm 1.9$

TOTAL FUSION

$286.1 \pm 2.0$

NORMAL ISOCHRON

$285.9 \pm 3.5$

INVERSE ISOCHRON

$286.2 \pm 3.5$

Sample Info

Groundmass

Kerguelen Plateau

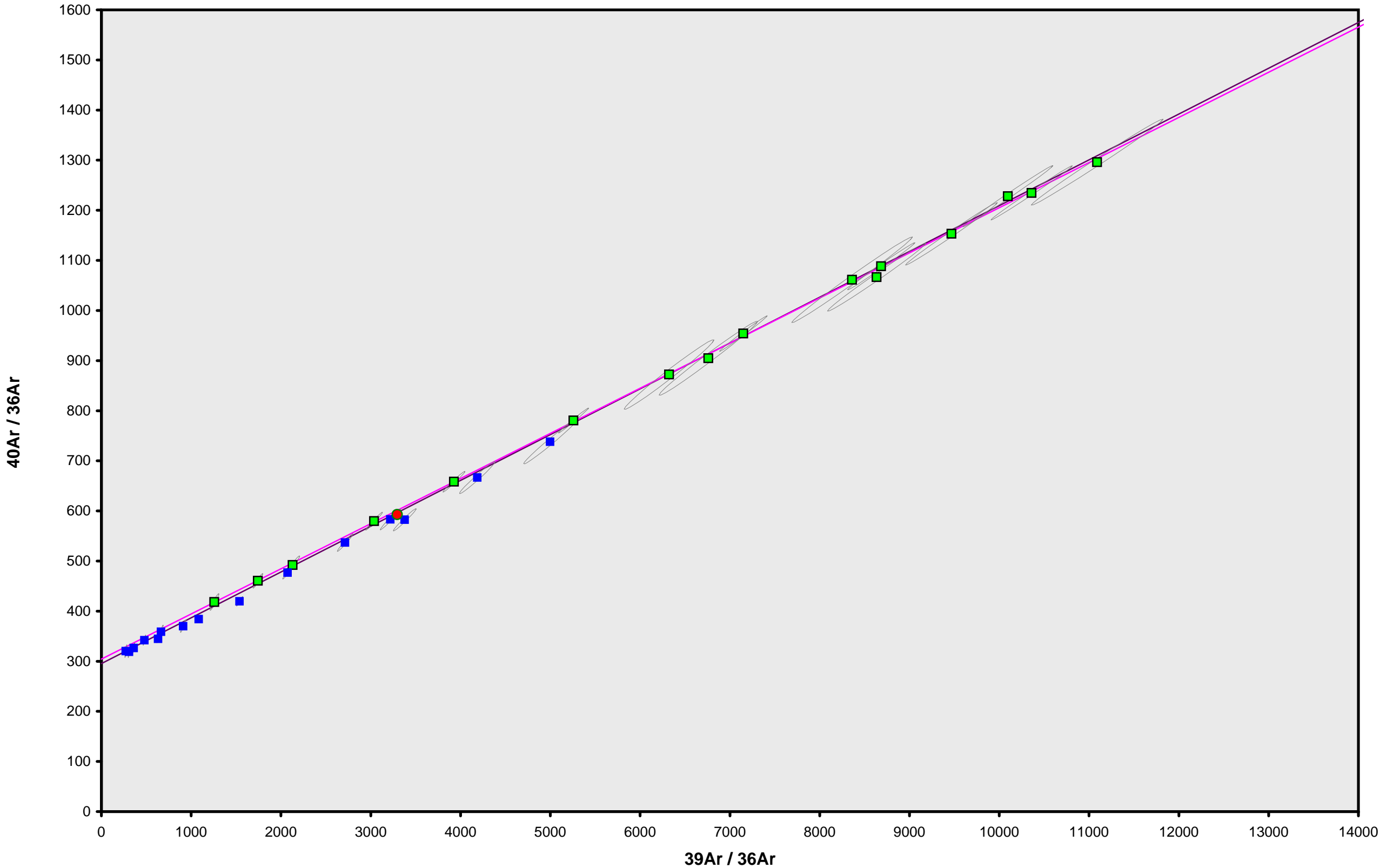
Dan Miggins

IRR = 14-OSU-07 (7B26-14)

J =  $0.00175554 \pm 0.00000202$



15D10263.AGE >>> 154-1 >>> KERGUELEN | FALLOON (14-PIL-01) PROJECT



**Ar-Ages in ka**

**WEIGHTED PLATEAU**  
 $290.1 \pm 1.9$

**TOTAL FUSION**  
 $286.1 \pm 2.0$

**NORMAL ISOCHRON**  
 $285.9 \pm 3.5$

**INVERSE ISOCHRON**  
 $286.2 \pm 3.5$

**MSWD (PROBABILITY)**  
 $0.61 (86\%)$

**40AR/36AR INTERCEPT**  
 $304.5 \pm 6.6$

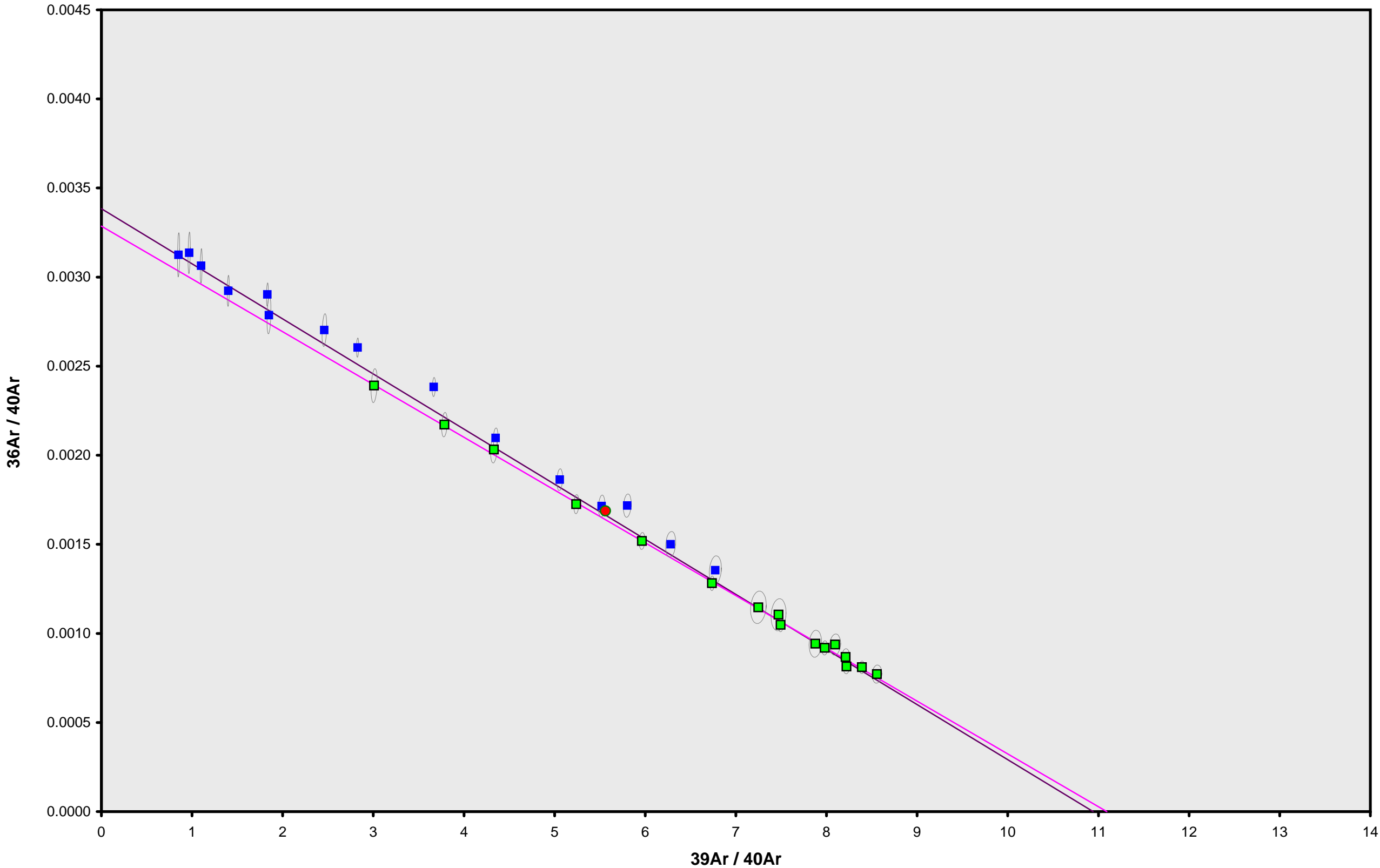
**Sample Info**

**Groundmass**  
Kerguelen Plateau  
Dan Miggins

**IRR = 14-OSU-07 (7B26-14)**  
**J =  $0.00175554 \pm 0.00000202$**



15D10263.AGE >>> 154-1 >>> KERGUELEN | FALLOON (14-PIL-01) PROJECT



Ar-Ages in ka

WEIGHTED PLATEAU

$290.1 \pm 1.9$

TOTAL FUSION

$286.1 \pm 2.0$

NORMAL ISOCHRON

$285.9 \pm 3.5$

INVERSE ISOCHRON

$286.2 \pm 3.5$

MSWD (PROBABILITY)

0.61 (86%)

SPREADING FACTOR

50.0%

40AR/36AR INTERCEPT

$304.3 \pm 6.6$

Sample Info

Groundmass

Kerguelen Plateau

Dan Miggins

IRR = 14-OSU-07 (7B26-14)

J =  $0.00175554 \pm 0.00000202$



Incremental Heating			36Ar(a) [fA]	37Ar(ca) [fA]	38Ar(cl) [fA]	39Ar(k) [fA]	40Ar(r) [fA]	Age ± 2σ (ka)	40Ar(r) (%)	39Ar(k) (%)	K/Ca ± 2σ
15D10222	2.0 %	✓	0.1344465	8.5078	0.0767929	14.6774	1.15597	248.7 ± 151.4	2.83	0.34	0.74 ± 0.04
15D10224	2.2 %	✓	0.1115778	9.7793	0.0082281	18.4100	0.77385	132.8 ± 117.3	2.29	0.43	0.81 ± 0.05
15D10225	2.4 %	✓	0.0992921	12.4652	0.0419197	22.4893	0.93481	131.3 ± 91.3	3.09	0.52	0.78 ± 0.03
15D10226	2.6 %	✓	0.0943032	14.9644	0.0151933	27.8585	1.19434	135.4 ± 66.8	4.11	0.65	0.80 ± 0.03
15D10228	2.8 %	✓	0.1139580	21.5802	0.0554401	41.6458	2.18138	165.4 ± 51.5	6.08	0.97	0.83 ± 0.02
15D10229	3.0 %	✓	0.1035480	24.5729	0.0545196	48.1403	2.65555	174.2 ± 43.1	7.97	1.12	0.84 ± 0.02
15D10230	3.3 %	✓	0.0705405	18.1918	0.0016646	37.1108	1.59226	135.5 ± 53.6	7.08	0.87	0.88 ± 0.03
15D10231	3.6 %	✓	0.1663247	48.5513	0.0333668	103.1736	5.03940	154.3 ± 24.7	9.28	2.41	0.91 ± 0.01
15D10233	3.9 %	✓	0.1024284	37.3299	0.0093774	80.4652	3.29485	129.3 ± 27.0	9.79	1.88	0.93 ± 0.01
15D10234	4.3 %	✓	0.0953698	38.6133	0.0246196	87.3027	4.24604	153.6 ± 23.1	13.06	2.04	0.97 ± 0.01
15D10235	4.6 %	✓	0.0996271	43.3206	0.0000000	100.9170	4.68797	146.7 ± 20.7	13.70	2.36	1.00 ± 0.01
15D10236	4.9 %	✓	0.1041782	50.9561	0.0488005	121.8679	6.55027	169.8 ± 17.6	17.49	2.84	1.03 ± 0.01
15D10238	5.2 %	✓	0.1088973	56.9506	0.0258339	139.2040	6.43612	146.0 ± 15.4	16.61	3.25	1.05 ± 0.01
15D10239	5.5 %	✓	0.1599598	87.7818	0.1043205	221.8288	10.62960	151.3 ± 12.1	18.29	5.18	1.09 ± 0.01
15D10240	5.8 %	✓	0.0808786	56.0969	0.0353772	146.6823	6.60034	142.1 ± 13.7	21.54	3.42	1.12 ± 0.01
15D10242	6.1 %	✓	0.0736537	55.1229	0.0665154	145.8684	7.17209	155.3 ± 13.0	24.66	3.41	1.14 ± 0.01
15D10243	6.5 %	✓	0.0870004	64.2884	0.1362419	173.3023	8.51224	155.1 ± 12.4	24.75	4.05	1.16 ± 0.01
15D10244	7.0 %	✓	0.1137383	84.9096	0.1190218	232.8626	11.43001	155.0 ± 10.1	25.25	5.44	1.18 ± 0.01
15D10246	7.6 %	✓	0.1061571	86.3796	0.1331250	241.5366	11.60308	151.7 ± 9.2	26.85	5.64	1.20 ± 0.01
15D10247	8.4 %	✓	0.1228840	104.3508	0.2167209	292.7212	14.50698	156.5 ± 8.1	28.38	6.83	1.21 ± 0.01
15D10248	9.4 %	✓	0.1511996	121.8624	0.2347890	346.7480	16.45470	149.9 ± 7.3	26.76	8.09	1.22 ± 0.01
15D10250	10.5 %	✓	0.1619033	112.1787	0.2615116	319.5011	15.11106	149.4 ± 7.9	23.88	7.46	1.22 ± 0.01
15D10251	11.7 %	✓	0.1851338	99.5475	0.2906861	282.1404	13.16057	147.3 ± 9.1	19.31	6.59	1.22 ± 0.01
15D10252	13.1 %	✓	0.3641143	133.7877	0.5249044	314.3026	15.79096	158.7 ± 12.2	12.77	7.34	1.01 ± 0.01
15D10254	14.7 %	✓	0.4306670	129.8208	0.6268277	255.8008	13.24768	163.6 ± 15.7	9.41	5.97	0.85 ± 0.01
15D10255	16.5 %	✓	0.4393026	149.0192	0.5541797	194.6602	10.22613	165.9 ± 21.2	7.29	4.54	0.56 ± 0.00
15D10256	18.5 %	✓	0.2612931	128.7445	0.2334137	107.5626	4.95671	145.5 ± 28.1	6.02	2.51	0.36 ± 0.00
15D10258	19.8 %	✓	0.1702534	105.2696	0.1585428	65.3229	3.12502	151.1 ± 41.1	5.84	1.52	0.27 ± 0.00
15D10259	21.7 %	✓	0.1444719	148.2969	0.1430692	49.3040	2.30777	147.8 ± 52.1	5.12	1.15	0.14 ± 0.00
15D10260	22.8 %	✓	0.0921049	97.6518	0.0707780	29.5146	1.37995	147.7 ± 73.0	4.82	0.69	0.13 ± 0.00
15D10262	24.3 %	✓	0.0691370	78.1632	0.0344593	20.7764	1.05933	161.0 ± 95.1	4.92	0.49	0.11 ± 0.00
Σ			4.6183447	2229.0560	4.3402408	4283.6983	208.01703				

Information on Analysis	Results	40(r)/39(k) ± 2σ	Age ± 2σ (ka)	MSWD	39Ar(k) (%,n)	K/Ca ± 2σ
Sample = 1180256-1 Material = Groundmass Location = Kerguelen Plateau Analyst = Dan Miggins Project = KERGUELEN   FALLOON (14-I Mass Discrimination Law = LIN Irradiation = 14-OSU-07 (7B27-14) J = 0.00174661 ± 0.00000199 FCT-NM = 28.201 ± 0.023 Ma	Age Plateau	0.04825 ± 0.00085 ± 1.75%	152.4 ± 2.7 ± 1.77%	0.77 81%	100.00 31	0.21 ± 0.09
	Total Fusion Age	0.04856 ± 0.00103 ± 2.12%	153.4 ± 3.3 ± 2.13%	1.0000	31	0.83 ± 0.00



Normal Isochron			39(k)/36(a) ± 2σ	40(a+r)/36(a) ± 2σ	r.i.
15D10222	2.0 %	✓	109.17 ± 1.95	304.10 ± 5.37	0.9284
15D10224	2.2 %	✓	165.00 ± 3.36	302.44 ± 6.26	0.9452
15D10225	2.4 %	✓	226.50 ± 4.89	304.91 ± 6.74	0.9504
15D10226	2.6 %	✓	295.41 ± 6.02	308.16 ± 6.50	0.9450
15D10228	2.8 %	✓	365.45 ± 7.15	314.64 ± 6.32	0.9611
15D10229	3.0 %	✓	464.91 ± 9.63	321.15 ± 6.85	0.9613
15D10230	3.3 %	✓	526.09 ± 15.27	318.07 ± 9.55	0.9603
15D10231	3.6 %	✓	620.31 ± 9.98	325.80 ± 5.33	0.9741
15D10233	3.9 %	✓	785.57 ± 17.26	327.67 ± 7.39	0.9685
15D10234	4.3 %	✓	915.41 ± 20.00	340.02 ± 7.64	0.9668
15D10235	4.6 %	✓	1012.95 ± 21.97	342.56 ± 7.63	0.9681
15D10236	4.9 %	✓	1169.80 ± 24.99	358.38 ± 7.83	0.9729
15D10238	5.2 %	✓	1278.31 ± 25.97	354.60 ± 7.37	0.9720
15D10239	5.5 %	✓	1386.78 ± 24.36	361.95 ± 6.44	0.9815
15D10240	5.8 %	✓	1813.61 ± 46.36	377.11 ± 9.89	0.9719
15D10242	6.1 %	✓	1980.46 ± 52.18	392.88 ± 10.62	0.9718
15D10243	6.5 %	✓	1991.97 ± 50.84	393.34 ± 10.24	0.9778
15D10244	7.0 %	✓	2047.35 ± 43.91	395.99 ± 8.63	0.9806
15D10246	7.6 %	✓	2275.28 ± 49.51	404.80 ± 8.96	0.9795
15D10247	8.4 %	✓	2382.09 ± 47.71	413.55 ± 8.40	0.9822
15D10248	9.4 %	✓	2293.31 ± 40.34	404.33 ± 7.20	0.9826
15D10250	10.5 %	✓	1973.41 ± 31.99	388.83 ± 6.38	0.9811
15D10251	11.7 %	✓	1523.98 ± 22.21	366.59 ± 5.41	0.9793
15D10252	13.1 %	✓	863.20 ± 9.66	338.87 ± 3.80	0.9840
15D10254	14.7 %	✓	593.96 ± 5.93	326.26 ± 3.26	0.9820
15D10255	16.5 %	✓	443.11 ± 4.45	318.78 ± 3.20	0.9820
15D10256	18.5 %	✓	411.65 ± 5.05	314.47 ± 3.89	0.9757
15D10258	19.8 %	✓	383.68 ± 6.37	313.86 ± 5.29	0.9734
15D10259	21.7 %	✓	341.27 ± 6.38	311.47 ± 5.92	0.9713
15D10260	22.8 %	✓	320.45 ± 7.80	310.48 ± 7.75	0.9608
15D10262	24.3 %	✓	300.51 ± 8.89	310.82 ± 9.48	0.9538

Results	40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (ka)	MSWD
Normal Isochron	296.42 ± 1.60 ± 0.54%	0.04756 ± 0.00143 ± 3.01%	150.2 ± 4.5 ± 3.01% Full External Error ± 5.7 Analytical Error ± 4.5	0.75 83%
Statistics	2σ Confidence Limit Error Magnification Number of Data Points	1.53 1.0000 31	Convergence Number of Iterations Calculated Line	0.000000292507 6 Weighted York-2



Inverse Isochron		39(k)/40(a+r) ± 2σ		36(a)/40(a+r) ± 2σ	r.i.
15D10222	2.0 %	✓	0.3589936 ± 0.0024119	0.00328841 ± 0.00005812	0.1684
15D10224	2.2 %	✓	0.5455602 ± 0.0037161	0.00330649 ± 0.00006847	0.2114
15D10225	2.4 %	✓	0.7428190 ± 0.0051225	0.00327961 ± 0.00007249	0.2325
15D10226	2.6 %	✓	0.9586238 ± 0.0066247	0.00324502 ± 0.00006840	0.2619
15D10228	2.8 %	✓	1.1614747 ± 0.0064520	0.00317822 ± 0.00006385	0.2304
15D10229	3.0 %	✓	1.4476539 ± 0.0085173	0.00311385 ± 0.00006642	0.2407
15D10230	3.3 %	✓	1.6540005 ± 0.0138542	0.00314394 ± 0.00009439	0.2566
15D10231	3.6 %	✓	1.9039814 ± 0.0070502	0.00306938 ± 0.00005025	0.1880
15D10233	3.9 %	✓	2.3974762 ± 0.0134790	0.00305188 ± 0.00006887	0.2285
15D10234	4.3 %	✓	2.6922177 ± 0.0154729	0.00294099 ± 0.00006610	0.2351
15D10235	4.6 %	✓	2.9570326 ± 0.0165225	0.00291924 ± 0.00006506	0.2312
15D10236	4.9 %	✓	3.2641788 ± 0.0165122	0.00279037 ± 0.00006099	0.2120
15D10238	5.2 %	✓	3.6048945 ± 0.0176161	0.00282006 ± 0.00005865	0.2147
15D10239	5.5 %	✓	3.8313902 ± 0.0130398	0.00276280 ± 0.00004915	0.1610
15D10240	5.8 %	✓	4.8092633 ± 0.0296705	0.00265176 ± 0.00006953	0.2226
15D10242	6.1 %	✓	5.0409361 ± 0.0321535	0.00254533 ± 0.00006881	0.2242
15D10243	6.5 %	✓	5.0642301 ± 0.0275934	0.00254232 ± 0.00006616	0.1956
15D10244	7.0 %	✓	5.1701663 ± 0.0220906	0.00252529 ± 0.00005501	0.1764
15D10246	7.6 %	✓	5.6207258 ± 0.0250610	0.00247035 ± 0.00005467	0.1828
15D10247	8.4 %	✓	5.7600521 ± 0.0219825	0.00241806 ± 0.00004909	0.1649
15D10248	9.4 %	✓	5.6719168 ± 0.0187591	0.00247324 ± 0.00004402	0.1558
15D10250	10.5 %	✓	5.0751925 ± 0.0161061	0.00257179 ± 0.00004221	0.1592
15D10251	11.7 %	✓	4.1572171 ± 0.0124318	0.00272787 ± 0.00004025	0.1618
15D10252	13.1 %	✓	2.5472960 ± 0.0051050	0.00295100 ± 0.00003308	0.0999
15D10254	14.7 %	✓	1.8205198 ± 0.0034470	0.00306503 ± 0.00003060	0.0942
15D10255	16.5 %	✓	1.3900324 ± 0.0026474	0.00313698 ± 0.00003146	0.0910
15D10256	18.5 %	✓	1.3090438 ± 0.0035582	0.00317995 ± 0.00003934	0.1509
15D10258	19.8 %	✓	1.2224755 ± 0.0047269	0.00318618 ± 0.00005368	0.1802
15D10259	21.7 %	✓	1.0956634 ± 0.0049591	0.00321054 ± 0.00006107	0.1895
15D10260	22.8 %	✓	1.0320895 ± 0.0071534	0.00322080 ± 0.00008044	0.2288
15D10262	24.3 %	✓	0.9668244 ± 0.0088781	0.00321727 ± 0.00009815	0.2500

Results	40(a)/36(a) ± 2σ		40(r)/39(k) ± 2σ	Age ± 2σ (ka)	MSWD	
Inverse Isochron	296.45	± 1.60 ± 0.54%	0.04758	± 0.00142 ± 2.99%	150.3 ± 4.5 ± 3.00%	0.75 83%
	Full External Error ± 5.6 Analytical Error ± 4.5					
Statistics	2σ Confidence Limit	1.53	Convergence	0.0071894521		
	Error Magnification	1.0000	Number of Iterations	3		
	Number of Data Points	31	Calculated Line	Weighted York-2		
	Spreading Factor	25.7%				







OSU Argon Geochronology Lab																																		
Degassing Patterns			36Ar(a)	%1σ	36Ar(c)	%1σ	36Ar(ca)	%1σ	36Ar(cl)	%1σ	37Ar(ca)	%1σ	38Ar(a)	%1σ	38Ar(c)	%1σ	38Ar(k)	%1σ	38Ar(ca)	%1σ	38Ar(cl)	%1σ	39Ar(k)	%1σ	39Ar(ca)	%1σ	40Ar(r)	%1σ	40Ar(a)	%1σ	40Ar(c)	%1σ	40Ar(k)	%1σ
			[fA]		[fA]		[fA]		[fA]		[fA]		[fA]		[fA]		[fA]		[fA]		[fA]		[fA]		[fA]		[fA]		[fA]		[fA]		[fA]	
15D10222	2.0 %	✓	0.1344465	0.85	0.0000000	0.00	0.0022460	3.01	0.0000114	49.22	8.5078	3.01	0.0251281	0.85	0.0000000	0.00	0.167029	0.25	0.0001183	3.01	0.0767929	49.23	14.6774	0.25	0.0057257	3.01	1.15597	30.43	39.7289	0.85	0.0000000	0.00	0.0148242	0.25
15D10224	2.2 %	✓	0.1115778	1.00	0.0000000	0.00	0.0025817	2.81	0.0000012	474.88	9.7793	2.81	0.0208539	1.00	0.0000000	0.00	0.209506	0.20	0.0001359	2.81	0.0082281	474.89	18.4100	0.20	0.0065815	2.81	0.77385	44.19	32.9712	1.00	0.0000000	0.00	0.0185941	0.20
15D10225	2.4 %	✓	0.0992921	1.06	0.0000000	0.00	0.0032908	2.09	0.0000062	91.16	12.4652	2.09	0.0185577	1.06	0.0000000	0.00	0.255928	0.17	0.0001733	2.09	0.0419197	91.17	22.4893	0.17	0.0083890	2.09	0.93481	34.77	29.3408	1.06	0.0000000	0.00	0.0227142	0.17
15D10226	2.6 %	✓	0.0943032	1.01	0.0000000	0.00	0.0039506	1.78	0.0000023	256.92	14.9644	1.78	0.0176253	1.01	0.0000000	0.00	0.317030	0.16	0.0002080	1.78	0.0151933	256.92	27.8585	0.16	0.0100710	1.78	1.19434	24.68	27.8666	1.01	0.0000000	0.00	0.0281371	0.16
15D10228	2.8 %	✓	0.1139580	0.97	0.0000000	0.00	0.0056972	1.28	0.0000083	68.49	21.5802	1.28	0.0212988	0.97	0.0000000	0.00	0.473929	0.11	0.0003000	1.28	0.0554401	68.50	41.6458	0.11	0.0145235	1.28	2.18138	15.57	33.6746	0.97	0.0000000	0.00	0.0420623	0.11
15D10229	3.0 %	✓	0.1035480	1.03	0.0000000	0.00	0.0064873	1.16	0.0000081	70.93	24.5729	1.16	0.0193531	1.03	0.0000000	0.00	0.547836	0.10	0.0003416	1.16	0.0545196	70.94	48.1403	0.10	0.0165376	1.16	2.65555	12.36	30.5984	1.03	0.0000000	0.00	0.0486217	0.10
15D10230	3.3 %	✓	0.0705405	1.45	0.0000000	0.00	0.0048026	1.54	0.0000002	#####	18.1918	1.54	0.0131840	1.45	0.0000000	0.00	0.422321	0.12	0.0002529	1.54	0.0016646	#####	37.1108	0.12	0.0122431	1.54	1.59226	19.76	20.8447	1.45	0.0000000	0.00	0.0374819	0.12
15D10231	3.6 %	✓	0.1663247	0.80	0.0000000	0.00	0.0128175	0.65	0.0000050	117.10	48.5513	0.65	0.0310861	0.80	0.0000000	0.00	1.174116	0.08	0.0006749	0.65	0.0333668	117.10	103.1736	0.08	0.0326750	0.65	5.03940	8.02	49.1490	0.80	0.0000000	0.00	0.1042054	0.08
15D10233	3.9 %	✓	0.1024284	1.10	0.0000000	0.00	0.0098551	0.79	0.0000014	416.11	37.3299	0.79	0.0191439	1.10	0.0000000	0.00	0.915694	0.08	0.0005189	0.79	0.0093774	416.11	80.4652	0.08	0.0251230	0.79	3.29485	10.43	30.2676	1.10	0.0000000	0.00	0.0812698	0.08
15D10234	4.3 %	✓	0.0953698	1.09	0.0000000	0.00	0.0101939	0.74	0.0000037	160.20	38.6133	0.74	0.0178246	1.09	0.0000000	0.00	0.993505	0.08	0.0005367	0.74	0.0246196	160.20	87.3027	0.08	0.0259868	0.74	4.24604	7.53	28.1818	1.09	0.0000000	0.00	0.0881758	0.08
15D10235	4.6 %	✓	0.0996271	1.08	0.0000000	0.00	0.0114366	0.69	0.0000000	0.00	43.3206	0.69	0.0186203	1.08	0.0000000	0.00	1.148435	0.08	0.0006022	0.69	0.0000000	0.00	100.9170	0.08	0.0291548	0.69	4.68797	7.07	29.4398	1.08	0.0000000	0.00	0.1019261	0.08
15D10236	4.9 %	✓	0.1041782	1.07	0.0000000	0.00	0.0134524	0.61	0.0000073	78.36	50.9561	0.61	0.0194709	1.07	0.0000000	0.00	1.386857	0.07	0.0007083	0.61	0.0488005	78.37	121.8679	0.07	0.0342935	0.61	6.55027	5.20	30.7847	1.07	0.0000000	0.00	0.1230866	0.07
15D10238	5.2 %	✓	0.1088973	1.01	0.0000000	0.00	0.0150350	0.57	0.0000039	144.44	56.9506	0.57	0.0203529	1.01	0.0000000	0.00	1.584142	0.07	0.0007916	0.57	0.0258339	144.45	139.2040	0.07	0.0383277	0.57	6.43612	5.26	32.1792	1.01	0.0000000	0.00	0.1405961	0.07
15D10239	5.5 %	✓	0.1599598	0.88	0.0000000	0.00	0.0231744	0.44	0.0000156	36.16	87.7818	0.44	0.0298965	0.88	0.0000000	0.00	2.524412	0.07	0.0012202	0.44	0.1043205	36.17	221.8288	0.07	0.0590772	0.44	10.62960	3.99	47.2681	0.88	0.0000000	0.00	0.2240471	0.07
15D10240	5.8 %	✓	0.0808786	1.28	0.0000000	0.00	0.0148096	0.57	0.0000053	110.64	56.0969	0.57	0.0151162	1.28	0.0000000	0.00	1.669245	0.07	0.0007797	0.57	0.0353772	110.64	146.6823	0.07	0.0377532	0.57	6.60034	4.82	23.8996	1.28	0.0000000	0.00	0.1481491	0.07
15D10242	6.1 %	✓	0.0736537	1.32	0.0000000	0.00	0.0145524	0.58	0.0000099	60.93	55.1229	0.58	0.0137659	1.32	0.0000000	0.00	1.659982	0.07	0.0007662	0.58	0.0665154	60.93	145.8684	0.07	0.0370977	0.58	7.17209	4.18	21.7647	1.32	0.0000000	0.00	0.1473271	0.07
15D10243	6.5 %	✓	0.0870004	1.27	0.0000000	0.00	0.0169721	0.52	0.0000203	28.09	64.2884	0.52	0.0162604	1.27	0.0000000	0.00	1.972180	0.07	0.0008936	0.52	0.1362419	28.10	173.3023	0.07	0.0432661	0.52	8.51224	3.99	25.7086	1.27	0.0000000	0.00	0.1750353	0.07
15D10244	7.0 %	✓	0.1137383	1.07	0.0000000	0.00	0.0224161	0.45	0.0000178	32.83	84.9096	0.45	0.0212577	1.07	0.0000000	0.00	2.649976	0.07	0.0011802	0.45	0.1190218	32.84	232.8626	0.07	0.0571442	0.45	11.43001	3.25	33.6097	1.07	0.0000000	0.00	0.2351912	0.07
15D10246	7.6 %	✓	0.1061571	1.09	0.0000000	0.00	0.0228042	0.44	0.0000199	29.33	86.3796	0.44	0.0198408	1.09	0.0000000	0.00	2.748687	0.07	0.0012007	0.44	0.1331250	29.35	241.5366	0.07	0.0581335	0.44	11.60308	3.04	31.3694	1.09	0.0000000	0.00	0.2439520	0.07
15D10247	8.4 %	✓	0.1228840	1.00	0.0000000	0.00	0.0275486	0.41	0.0000324	18.10	104.3508	0.41	0.0229670	1.00	0.0000000	0.00	3.331167	0.07	0.0014505	0.41	0.2167209	18.13	292.7212	0.07	0.0702281	0.41	14.50698	2.58	36.3122	1.00	0.0000000	0.00	0.2956484	0.07
15D10248	9.4 %	✓	0.1511996	0.88	0.0000000	0.00	0.0321717	0.39	0.0000351	16.55	121.8624	0.39	0.0282592	0.88	0.0000000	0.00	3.945993	0.07	0.0016939	0.39	0.2347890	16.57	346.7480	0.07	0.0820134	0.39	16.45470	2.45	44.6795	0.88	0.0000000	0.00	0.3502155	0.07
15D10250	10.5 %	✓	0.1619033	0.81	0.0000000	0.00	0.0296152	0.41	0.0000391	15.12	112.1787	0.41	0.0302597	0.81	0.0000000	0.00	3.635923	0.07	0.0015593	0.41	0.2615116	15.14	319.5011	0.07	0.0754963	0.41	15.11106	2.63	47.8424	0.81	0.0000000	0.00	0.3226961	0.07
15D10251	11.7 %	✓	0.1851338	0.73	0.0000000	0.00	0.0262806	0.43	0.0000434	13.55	99.5475	0.43	0.0346015	0.73	0.0000000	0.00	3.210758	0.07	0.0013837	0.43	0.2906861	13.58	282.1404	0.07	0.0669955	0.43	13.16057	3.09	54.7070	0.73	0.0000000	0.00	0.2849618	0.07
15D10252	13.1 %	✓	0																															



Additional Parameters			40Ar/39Ar	1σ	37Ar/39Ar	1σ	36Ar/39Ar	1σ	Time (days)	37Ar (decay)	39Ar (decay)	40Ar (moles)
15D10222	2.0 %	✓	2.785488	0.009353	0.579424	0.017525	0.009310	0.000082	91.774	6.142184	1.00064865	1.963E-12
15D10224	2.2 %	✓	1.833333	0.006241	0.531007	0.014936	0.006199	0.000062	91.792	6.144459	1.00064878	1.621E-12
15D10225	2.4 %	✓	1.346731	0.004641	0.554063	0.011627	0.004560	0.000048	91.803	6.145723	1.00064885	1.454E-12
15D10226	2.6 %	✓	1.043795	0.003604	0.536963	0.009621	0.003526	0.000034	91.813	6.146904	1.00064892	1.396E-12
15D10228	2.8 %	✓	0.861684	0.002391	0.518004	0.006675	0.002872	0.000027	91.831	6.149181	1.00064905	1.723E-12
15D10229	3.0 %	✓	0.691545	0.002032	0.510269	0.005930	0.002285	0.000022	91.841	6.150362	1.00064912	1.599E-12
15D10230	3.3 %	✓	0.605405	0.002532	0.490041	0.007586	0.002030	0.000028	91.851	6.151543	1.00064919	1.079E-12
15D10231	3.6 %	✓	0.526059	0.000972	0.470430	0.003072	0.001736	0.000013	91.860	6.152640	1.00064925	2.606E-12
15D10233	3.9 %	✓	0.417985	0.001172	0.463781	0.003678	0.001395	0.000014	91.878	6.154834	1.00064938	1.615E-12
15D10234	4.3 %	✓	0.372340	0.001067	0.442161	0.003313	0.001209	0.000012	91.888	6.156016	1.00064945	1.561E-12
15D10235	4.6 %	✓	0.339089	0.000945	0.429146	0.002960	0.001100	0.000011	91.896	6.157030	1.00064951	1.643E-12
15D10236	4.9 %	✓	0.307279	0.000775	0.418008	0.002569	0.000965	0.000009	91.905	6.158128	1.00064957	1.798E-12
15D10238	5.2 %	✓	0.278334	0.000678	0.409003	0.002363	0.000890	0.000008	91.922	6.160240	1.00064970	1.860E-12
15D10239	5.5 %	✓	0.261942	0.000444	0.395613	0.001772	0.000825	0.000006	91.931	6.161254	1.00064975	2.790E-12
15D10240	5.8 %	✓	0.208888	0.000641	0.382340	0.002206	0.000652	0.000007	91.940	6.162353	1.00064982	1.471E-12
15D10242	6.1 %	✓	0.199335	0.000633	0.377799	0.002217	0.000605	0.000007	91.957	6.164466	1.00064994	1.396E-12
15D10243	6.5 %	✓	0.198424	0.000538	0.370868	0.001949	0.000600	0.000006	91.965	6.165481	1.00065000	1.651E-12
15D10244	7.0 %	✓	0.194380	0.000413	0.364545	0.001652	0.000585	0.000005	91.974	6.166580	1.00065006	2.173E-12
15D10246	7.6 %	✓	0.178880	0.000397	0.357539	0.001598	0.000534	0.000005	91.992	6.168695	1.00065019	2.074E-12
15D10247	8.4 %	✓	0.174578	0.000331	0.356400	0.001478	0.000514	0.000004	92.000	6.169711	1.00065025	2.454E-12
15D10248	9.4 %	✓	0.177275	0.000292	0.351361	0.001404	0.000529	0.000004	92.009	6.170811	1.00065031	2.951E-12
15D10250	10.5 %	✓	0.198000	0.000313	0.351023	0.001455	0.000599	0.000004	92.026	6.172928	1.00065043	3.037E-12
15D10251	11.7 %	✓	0.241498	0.000360	0.352746	0.001521	0.000749	0.000005	92.035	6.173944	1.00065049	3.271E-12
15D10252	13.1 %	✓	0.393470	0.000394	0.425543	0.001649	0.001271	0.000006	92.044	6.175045	1.00065055	5.938E-12
15D10254	14.7 %	✓	0.550116	0.000520	0.507334	0.001970	0.001817	0.000008	92.061	6.177163	1.00065068	6.757E-12
15D10255	16.5 %	✓	0.720047	0.000685	0.765141	0.002885	0.002458	0.000011	92.069	6.178180	1.00065074	6.731E-12
15D10256	18.5 %	✓	0.764311	0.001038	1.195963	0.004809	0.002743	0.000015	92.078	6.179281	1.00065080	3.949E-12
15D10258	19.8 %	✓	0.818135	0.001580	1.609782	0.006860	0.003029	0.000022	92.097	6.181485	1.00065093	2.568E-12
15D10259	21.7 %	✓	0.911853	0.002061	3.001732	0.011749	0.003717	0.000027	92.106	6.182588	1.00065099	2.162E-12
15D10260	22.8 %	✓	0.967763	0.003350	3.301241	0.015068	0.003986	0.000038	92.115	6.183690	1.00065105	1.374E-12
15D10262	24.3 %	✓	1.032709	0.004736	3.752615	0.019423	0.004310	0.000049	92.132	6.185811	1.00065118	1.032E-12



Procedure Blanks		36Ar [fA]	1σ	37Ar [fA]	1σ	38Ar [fA]	1σ	39Ar [fA]	1σ	40Ar [fA]	1σ
15D10222	2.0 %	0.0114357	0.0005239	0.0200487	0.0295490	0.0335070	0.0268654	0.0075077	0.0247177	3.2374965	0.0854498
15D10224	2.2 %	0.0113928	0.0005239	0.0195342	0.0295490	0.0290856	0.0268654	0.0424334	0.0247177	3.2323380	0.0854498
15D10225	2.4 %	0.0113689	0.0005239	0.0192400	0.0295490	0.0267937	0.0268654	0.0563595	0.0247177	3.2294721	0.0854498
15D10226	2.6 %	0.0113467	0.0005239	0.0189600	0.0295490	0.0247608	0.0268654	0.0662795	0.0247177	3.2267974	0.0854498
15D10228	2.8 %	0.0113038	0.0005239	0.0184052	0.0295490	0.0211292	0.0268654	0.0781744	0.0247177	3.2216388	0.0854498
15D10229	3.0 %	0.0112815	0.0005239	0.0181099	0.0295490	0.0193960	0.0268654	0.0811449	0.0247177	3.2189640	0.0854498
15D10230	3.3 %	0.0112593	0.0005239	0.0178093	0.0295490	0.0177653	0.0268654	0.0822886	0.0247177	3.2162893	0.0854498
15D10231	3.6 %	0.0112386	0.0005239	0.0175255	0.0295490	0.0163428	0.0268654	0.0819384	0.0247177	3.2138055	0.0854498
15D10233	3.9 %	0.0111973	0.0005239	0.0169444	0.0295490	0.0137625	0.0268654	0.0779381	0.0247177	3.2088381	0.0854498
15D10234	4.3 %	0.0111750	0.0005239	0.0166241	0.0295490	0.0125194	0.0268654	0.0743627	0.0247177	3.2061633	0.0854498
15D10235	4.6 %	0.0111560	0.0005239	0.0163453	0.0295490	0.0115354	0.0268654	0.0707095	0.0247177	3.2038706	0.0854498
15D10236	4.9 %	0.0111353	0.0005239	0.0160390	0.0295490	0.0105543	0.0268654	0.0662854	0.0247177	3.2013869	0.0854498
15D10238	5.2 %	0.0110956	0.0005239	0.0154372	0.0295490	0.0089156	0.0268654	0.0569168	0.0247177	3.1966104	0.0854498
15D10239	5.5 %	0.0110765	0.0005239	0.0151424	0.0295490	0.0082451	0.0268654	0.0522323	0.0247177	3.1943178	0.0854498
15D10240	5.8 %	0.0110559	0.0005239	0.0148187	0.0295490	0.0076035	0.0268654	0.0471617	0.0247177	3.1918340	0.0854498
15D10242	6.1 %	0.0110161	0.0005239	0.0141836	0.0295490	0.0066179	0.0268654	0.0377839	0.0247177	3.1870576	0.0854498
15D10243	6.5 %	0.0109971	0.0005239	0.0138728	0.0295490	0.0062607	0.0268654	0.0336048	0.0247177	3.1847650	0.0854498
15D10244	7.0 %	0.0109764	0.0005239	0.0135318	0.0295490	0.0059588	0.0268654	0.0294063	0.0247177	3.1822812	0.0854498
15D10246	7.6 %	0.0109367	0.0005239	0.0128633	0.0295490	0.0056261	0.0268654	0.0225111	0.0247177	3.1775048	0.0854498
15D10247	8.4 %	0.0109176	0.0005239	0.0125365	0.0295490	0.0055825	0.0268654	0.0198336	0.0247177	3.1752121	0.0854498
15D10248	9.4 %	0.0108969	0.0005239	0.0121781	0.0295490	0.0056200	0.0268654	0.0174397	0.0247177	3.1727284	0.0854498
15D10250	10.5 %	0.0108572	0.0005239	0.0114762	0.0295490	0.0059405	0.0268654	0.0143926	0.0247177	3.1679520	0.0854498
15D10251	11.7 %	0.0108381	0.0005239	0.0111334	0.0295490	0.0062102	0.0268654	0.0136718	0.0247177	3.1656593	0.0854498
15D10252	13.1 %	0.0108175	0.0005239	0.0107577	0.0295490	0.0065874	0.0268654	0.0134293	0.0247177	3.1631756	0.0854498
15D10254	14.7 %	0.0107777	0.0005239	0.0100225	0.0295490	0.0075608	0.0268654	0.0144687	0.0247177	3.1583992	0.0854498
15D10255	16.5 %	0.0107587	0.0005239	0.0096636	0.0295490	0.0081440	0.0268654	0.0156192	0.0247177	3.1561065	0.0854498
15D10256	18.5 %	0.0107380	0.0005239	0.0092706	0.0295490	0.0088607	0.0268654	0.0172888	0.0247177	3.1536228	0.0854498
15D10258	19.8 %	0.0106967	0.0005239	0.0084709	0.0295490	0.0105590	0.0268654	0.0217191	0.0247177	3.1486553	0.0854498
15D10259	21.7 %	0.0106760	0.0005239	0.0080643	0.0295490	0.0115406	0.0268654	0.0243373	0.0247177	3.1461716	0.0854498
15D10260	22.8 %	0.0106554	0.0005239	0.0076532	0.0295490	0.0126104	0.0268654	0.0271120	0.0247177	3.1436878	0.0854498
15D10262	24.3 %	0.0106157	0.0005239	0.0068499	0.0295490	0.0149160	0.0268654	0.0325232	0.0247177	3.1389114	0.0854498



OSU Argon Geochronology Lab																									
Intercept Values	36Ar					37Ar					38Ar					39Ar					40Ar				
	[fA]	1σ	r2			[fA]	1σ	r2			[fA]	1σ	r2			[fA]	1σ	r2			[fA]	1σ	r2		
15D10222	2.0 %	0.1397742	0.0008721	0.0302	EXP 150 of 150	1.3783	0.0280	0.0589	EXP 150 of 150	0.2320729	0.0258660	0.0289	EXP 150 of 150	14.5862	0.0252	0.9330	EXP 150 of 150	44.25713	0.03315	0.9955	EXP 150 of 150				
15D10224	2.2 %	0.1185676	0.0008531	0.0252	EXP 149 of 150	1.5802	0.0319	0.0045	EXP 150 of 150	0.2065430	0.0276641	0.0014	EXP 150 of 150	18.3280	0.0252	0.9538	EXP 150 of 150	37.09500	0.03515	0.9949	EXP 150 of 150				
15D10225	2.4 %	0.1076802	0.0007967	0.0007	EXP 150 of 150	2.0081	0.0285	0.1837	EXP 149 of 150	0.2856810	0.0264639	0.0152	EXP 150 of 150	22.3940	0.0263	0.9673	EXP 150 of 150	33.61663	0.02940	0.9965	EXP 150 of 150				
15D10226	2.6 %	0.1035900	0.0006722	0.0021	EXP 150 of 150	2.4061	0.0297	0.1835	EXP 150 of 150	0.3207573	0.0276072	0.0003	EXP 150 of 150	27.7366	0.0301	0.9735	EXP 150 of 150	32.40115	0.02825	0.9968	EXP 150 of 150				
15D10228	2.8 %	0.1236445	0.0008401	0.0147	EXP 150 of 150	3.4597	0.0309	0.3212	EXP 150 of 150	0.5226959	0.0261128	0.0541	EXP 150 of 150	41.4421	0.0296	0.9887	EXP 150 of 150	39.22491	0.03173	0.9948	EXP 150 of 150				
15D10229	3.0 %	0.1145909	0.0008016	0.0007	EXP 150 of 150	3.9359	0.0319	0.3598	EXP 150 of 150	0.5945898	0.0270917	0.0555	EXP 150 of 150	47.8953	0.0308	0.9905	EXP 150 of 150	36.61920	0.03312	0.9945	EXP 150 of 150				
15D10230	3.3 %	0.0819921	0.0007743	0.0543	EXP 150 of 150	2.9176	0.0323	0.1811	EXP 150 of 150	0.4139859	0.0304122	0.0042	EXP 150 of 150	36.9412	0.0271	0.9877	EXP 149 of 150	25.75664	0.02943	0.9962	EXP 150 of 150				
15D10231	3.6 %	0.1794231	0.0010340	0.1904	EXP 150 of 150	7.7554	0.0318	0.6546	EXP 150 of 150	1.2068345	0.0276044	0.0492	EXP 150 of 150	102.5539	0.0327	0.9977	EXP 150 of 150	57.66552	0.03330	0.9913	EXP 150 of 150				
15D10233	3.9 %	0.1166110	0.0008634	0.0572	EXP 150 of 150	5.9643	0.0309	0.5948	EXP 150 of 150	0.9187235	0.0275581	0.0190	EXP 150 of 150	79.9955	0.0301	0.9969	EXP 150 of 150	36.95119	0.03010	0.9949	EXP 150 of 150				
15D10234	4.3 %	0.1102823	0.0007725	0.0002	EXP 150 of 150	6.1673	0.0287	0.6067	EXP 150 of 150	1.0105292	0.0281273	0.0402	EXP 150 of 150	86.7817	0.0353	0.9962	EXP 150 of 150	35.81747	0.02696	0.9960	EXP 150 of 150				
15D10235	4.6 %	0.1154233	0.0008127	0.0034	EXP 150 of 150	6.9157	0.0293	0.6136	EXP 150 of 150	1.1276699	0.0279518	0.0153	EXP 150 of 150	100.2985	0.0360	0.9971	EXP 150 of 150	37.53393	0.03358	0.9937	EXP 150 of 150				
15D10236	4.9 %	0.1215745	0.0008443	0.0036	EXP 150 of 150	8.1299	0.0297	0.7149	EXP 150 of 150	1.4264081	0.0264218	0.1506	EXP 149 of 150	121.1011	0.0335	0.9983	EXP 150 of 150	40.76922	0.03022	0.9945	EXP 150 of 150				
15D10238	5.2 %	0.1274475	0.0008300	0.0562	EXP 150 of 150	9.0808	0.0309	0.7563	EXP 150 of 150	1.6010577	0.0250798	0.1089	EXP 150 of 150	138.3084	0.0352	0.9985	EXP 150 of 150	42.06610	0.02962	0.9942	EXP 150 of 150				
15D10239	5.5 %	0.1830186	0.0011052	0.1787	EXP 150 of 150	13.9858	0.0297	0.8828	EXP 150 of 150	2.6171200	0.0254761	0.2636	EXP 150 of 150	220.3611	0.0374	0.9994	EXP 150 of 150	61.48647	0.03012	0.9920	EXP 150 of 150				
15D10240	5.8 %	0.1008934	0.0007723	0.0021	EXP 150 of 150	8.9412	0.0299	0.7174	EXP 150 of 150	1.6906084	0.0276466	0.0921	EXP 150 of 150	145.7231	0.0377	0.9985	EXP 150 of 150	33.92978	0.03346	0.9939	EXP 150 of 150				
15D10242	6.1 %	0.0938339	0.0007028	0.0779	EXP 150 of 150	8.7826	0.0303	0.7526	EXP 150 of 150	1.7118400	0.0295192	0.0892	EXP 150 of 150	144.9050	0.0357	0.9986	EXP 150 of 150	32.35641	0.02890	0.9952	EXP 150 of 150				
15D10243	6.5 %	0.1086261	0.0008537	0.0110	EXP 150 of 150	10.2385	0.0292	0.8137	EXP 150 of 150	2.0917578	0.0263377	0.2373	EXP 150 of 150	172.1456	0.0390	0.9988	EXP 150 of 150	37.68148	0.02935	0.9947	EXP 150 of 150				
15D10244	7.0 %	0.1388156	0.0009477	0.0028	EXP 149 of 150	13.5154	0.0291	0.8752	EXP 150 of 150	2.7492876	0.0273530	0.2846	EXP 150 of 150	231.2916	0.0393	0.9994	EXP 150 of 150	48.58987	0.03274	0.9924	EXP 150 of 150				
15D10246	7.6 %	0.1320249	0.0008810	0.0003	EXP 150 of 150	13.7438	0.0283	0.8762	EXP 150 of 150	2.8595927	0.0272912	0.2447	EXP 149 of 150	239.8980	0.0439	0.9993	EXP 150 of 150	46.52064	0.03268	0.9927	EXP 150 of 150				
15D10247	8.4 %	0.1521750	0.0009441	0.0004	EXP 150 of 150	16.5974	0.0285	0.9124	EXP 150 of 150	3.5204097	0.0273440	0.3810	EXP 150 of 150	290.7276	0.0435	0.9995	EXP 150 of 150	54.43989	0.03145	0.9928	EXP 150 of 150				
15D10248	9.4 %	0.1830799	0.0010179	0.0787	EXP 150 of 150	19.3768	0.0310	0.9283	EXP 150 of 150	4.1505244	0.0266101	0.4533	EXP 150 of 150	344.3793	0.0471	0.9996	EXP 150 of 150	64.83737	0.03620	0.9894	EXP 150 of 150				
15D10250	10.5 %	0.1906926	0.0009876	0.1437	EXP 150 of 150	17.8312	0.0326	0.9039	EXP 150 of 150	3.8723717	0.0276313	0.4077	EXP 150 of 150	317.3167	0.0465	0.9995	EXP 150 of 150	66.62964	0.03085	0.9905	EXP 150 of 150				
15D10251	11.7 %	0.2093559	0.0010034	0.3349	EXP 150 of 150	15.8218	0.0317	0.8859	EXP 148 of 150	3.4853577	0.0275005	0.3091	EXP 150 of 150	280.2127	0.0444	0.9994	EXP 150 of 150	71.51802	0.03096	0.9866	EXP 150 of 150				
15D10252	13.1 %	0.3858823	0.0015017	0.6138	EXP 150 of 150	21.2558	0.0300	0.9457	EXP 150 of 150	4.1109100	0.0260757	0.4272	EXP 150 of 150	312.1685	0.0426	0.9996	EXP 150 of 150	127.23000	0.03557	0.0340	EXP 150 of 150				
15D10254	14.7 %	0.4473537	0.0015083	0.7226	EXP 150 of 150	20.6181	0.0286	0.9440	EXP 150 of 150	3.5656429	0.0283900	0.4061	EXP 150 of 150	254.0815	0.0391	0.9995	EXP 150 of 150	144.33919	0.03874	0.9028	EXP 150 of 150				
15D10255	16.5 %	0.4601898	0.0015455	0.7208	EXP 150 of 150	23.6614	0.0293	0.9538	EXP 150 of 150	2.8084502	0.0266005	0.2767	EXP 150 of 150	193.3900	0.0376	0.9991	EXP 150 of 150	143.80385	0.03514	0.9357	EXP 150 of 150				
15D10256	18.5 %	0.2879829	0.0011641	0.5968	EXP 150 of 150	20.4395	0.0345	0.9195	EXP 150 of 150	1.4796887	0.0282843	0.0330	EXP 150 of 150	106.9004	0.0348	0.9976	EXP 150 of 150	85.67228	0.03609	0.8907	EXP 150 of 150				
15D10258	19.8 %	0.1966444	0.0010909	0.4077	EXP 150 of 150	16.7076	0.0316	0.9021	EXP 150 of 150	0.9125172	0.0249822	0.0263	EXP 150 of 150	64.9500	0.0317	0.9944	EXP 150 of 150	56.80638	0.03353	0.9732	EXP 150 of 150				
15D10259	21.7 %	0.1830818	0.0010343	0.2884	EXP 150 of 150	23.5284	0.0337	0.9398	EXP 150 of 150	0.7121655	0.0287025	0.0223	EXP 150 of 150	49.0765	0.0297	0.9915	EXP 149 of 150	48.32724	0.03165	0.9818	EXP 150 of 150				
15D10260	22.8 %	0.1213365	0.0008444	0.0994	EXP 150 of 150	15.4928	0.0326	0.8772	EXP 150 of 150	0.4071028	0.0241761	0.0018	EXP 150 of 150	29.3969	0.0290	0.9769	EXP 150 of 150	31.85437	0.02901	0.9905	EXP 150 of 150				
15D10262	24.3 %	0.0948991	0.0007542	0.0171	EXP 150 of 150	12.3973	0.0325	0.8122	EXP 150 of 150	0.2662932	0.0292671	0.0048	EXP 150 of 150	20.7133	0.0270	0.9554	EXP 150 of 150	24.71227	0.02884	0.9917	EXP 150 of 150				



OSU Argon Geochronology Lab																														
Sample Parameters		Sample	Material	Location	Analyst	Temp	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	Irradiation	X-pos	Y-pos	Z/H-pos
15D10222	2.0 %	1180256-1	Groundmass	Kerguelen Plateau	Dan Miggins	2	FCT-NM (7B27-14)	28.201	0.082	Kuiper et al (2008)	8.99878	0.114	0.00174661	0.114	303.357	0.116	0.993516587	0.065	1	4.8E-14	2	APR	2015	9	40	1	14-OSU-07	0.00	0.00	39.40
15D10224	2.2 %	1180256-1	Groundmass	Kerguelen Plateau	Dan Miggins	2.2	FCT-NM (7B27-14)	28.201	0.082	Kuiper et al (2008)	8.99878	0.114	0.00174661	0.114	303.357	0.116	0.993516587	0.065	1	4.8E-14	2	APR	2015	10	7	1	14-OSU-07	0.00	0.00	39.40
15D10225	2.4 %	1180256-1	Groundmass	Kerguelen Plateau	Dan Miggins	2.4	FCT-NM (7B27-14)	28.201	0.082	Kuiper et al (2008)	8.99878	0.114	0.00174661	0.114	303.357	0.116	0.993516587	0.065	1	4.8E-14	2	APR	2015	10	22	1	14-OSU-07	0.00	0.00	39.40
15D10226	2.6 %	1180256-1	Groundmass	Kerguelen Plateau	Dan Miggins	2.6	FCT-NM (7B27-14)	28.201	0.082	Kuiper et al (2008)	8.99878	0.114	0.00174661	0.114	303.357	0.116	0.993516587	0.065	1	4.8E-14	2	APR	2015	10	36	1	14-OSU-07	0.00	0.00	39.40
15D10228	2.8 %	1180256-1	Groundmass	Kerguelen Plateau	Dan Miggins	2.8	FCT-NM (7B27-14)	28.201	0.082	Kuiper et al (2008)	8.99878	0.114	0.00174661	0.114	303.357	0.116	0.993516587	0.065	1	4.8E-14	2	APR	2015	11	3	1	14-OSU-07	0.00	0.00	39.40
15D10229	3.0 %	1180256-1	Groundmass	Kerguelen Plateau	Dan Miggins	3	FCT-NM (7B27-14)	28.201	0.082	Kuiper et al (2008)	8.99878	0.114	0.00174661	0.114	303.357	0.116	0.993516587	0.065	1	4.8E-14	2	APR	2015	11	17	1	14-OSU-07	0.00	0.00	39.40
15D10230	3.3 %	1180256-1	Groundmass	Kerguelen Plateau	Dan Miggins	3.3	FCT-NM (7B27-14)	28.201	0.082	Kuiper et al (2008)	8.99878	0.114	0.00174661	0.114	303.357	0.116	0.993516587	0.065	1	4.8E-14	2	APR	2015	11	31	1	14-OSU-07	0.00	0.00	39.40
15D10231	3.6 %	1180256-1	Groundmass	Kerguelen Plateau	Dan Miggins	3.6	FCT-NM (7B27-14)	28.201	0.082	Kuiper et al (2008)	8.99878	0.114	0.00174661	0.114	303.357	0.116	0.993516587	0.065	1	4.8E-14	2	APR	2015	11	44	1	14-OSU-07	0.00	0.00	39.40
15D10233	3.9 %	1180256-1	Groundmass	Kerguelen Plateau	Dan Miggins	3.9	FCT-NM (7B27-14)	28.201	0.082	Kuiper et al (2008)	8.99878	0.114	0.00174661	0.114	303.357	0.116	0.993516587	0.065	1	4.8E-14	2	APR	2015	12	10	1	14-OSU-07	0.00	0.00	39.40
15D10234	4.3 %	1180256-1	Groundmass	Kerguelen Plateau	Dan Miggins	4.3	FCT-NM (7B27-14)	28.201	0.082	Kuiper et al (2008)	8.99878	0.114	0.00174661	0.114	303.357	0.116	0.993516587	0.065	1	4.8E-14	2	APR	2015	12	24	1	14-OSU-07	0.00	0.00	39.40
15D10235	4.6 %	1180256-1	Groundmass	Kerguelen Plateau	Dan Miggins	4.6	FCT-NM (7B27-14)	28.201	0.082	Kuiper et al (2008)	8.99878	0.114	0.00174661	0.114	303.357	0.116	0.993516587	0.065	1	4.8E-14	2	APR	2015	12	36	1	14-OSU-07	0.00	0.00	39.40
15D10236	4.9 %	1180256-1	Groundmass	Kerguelen Plateau	Dan Miggins	4.9	FCT-NM (7B27-14)	28.201	0.082	Kuiper et al (2008)	8.99878	0.114	0.00174661	0.114	303.357	0.116	0.993516587	0.065	1	4.8E-14	2	APR	2015	12	49	1	14-OSU-07	0.00	0.00	39.40
15D10238	5.2 %	1180256-1	Groundmass	Kerguelen Plateau	Dan Miggins	5.2	FCT-NM (7B27-14)	28.201	0.082	Kuiper et al (2008)	8.99878	0.114	0.00174661	0.114	303.357	0.116	0.993516587	0.065	1	4.8E-14	2	APR	2015	13	14	1	14-OSU-07	0.00	0.00	39.40
15D10239	5.5 %	1180256-1	Groundmass	Kerguelen Plateau	Dan Miggins	5.5	FCT-NM (7B27-14)	28.201	0.082	Kuiper et al (2008)	8.99878	0.114	0.00174661	0.114	303.357	0.116	0.993516587	0.065	1	4.8E-14	2	APR	2015	13	26	1	14-OSU-07	0.00	0.00	39.40
15D10240	5.8 %	1180256-1	Groundmass	Kerguelen Plateau	Dan Miggins	5.8	FCT-NM (7B27-14)	28.201	0.082	Kuiper et al (2008)	8.99878	0.114	0.00174661	0.114	303.357	0.116	0.993516587	0.065	1	4.8E-14	2	APR	2015	13	39	1	14-OSU-07	0.00	0.00	39.40
15D10242	6.1 %	1180256-1	Groundmass	Kerguelen Plateau	Dan Miggins	6.1	FCT-NM (7B27-14)	28.201	0.082	Kuiper et al (2008)	8.99878	0.114	0.00174661	0.114	303.357	0.116	0.993516587	0.065	1	4.8E-14	2	APR	2015	14	4	1	14-OSU-07	0.00	0.00	39.40
15D10243	6.5 %	1180256-1	Groundmass	Kerguelen Plateau	Dan Miggins	6.5	FCT-NM (7B27-14)	28.201	0.082	Kuiper et al (2008)	8.99878	0.114	0.00174661	0.114	303.357	0.116	0.993516587	0.065	1	4.8E-14	2	APR	2015	14	16	1	14-OSU-07	0.00	0.00	39.40
15D10244	7.0 %	1180256-1	Groundmass	Kerguelen Plateau	Dan Miggins	7	FCT-NM (7B27-14)	28.201	0.082	Kuiper et al (2008)	8.99878	0.114	0.00174661	0.114	303.357	0.116	0.993516587	0.065	1	4.8E-14	2	APR	2015	14	29	1	14-OSU-07	0.00	0.00	39.40
15D10246	7.6 %	1180256-1	Groundmass	Kerguelen Plateau	Dan Miggins	7.6	FCT-NM (7B27-14)	28.201	0.082	Kuiper et al (2008)	8.99878	0.114	0.00174661	0.114	303.357	0.116	0.993516587	0.065	1	4.8E-14	2	APR	2015	14	54	1	14-OSU-07	0.00	0.00	39.40
15D10247	8.4 %	1180256-1	Groundmass	Kerguelen Plateau	Dan Miggins	8.4	FCT-NM (7B27-14)	28.201	0.082	Kuiper et al (2008)	8.99878	0.114	0.00174661	0.114	303.357	0.116	0.993516587	0.065	1	4.8E-14	2	APR	2015	15	6	1	14-OSU-07	0.00	0.00	39.40
15D10248	9.4 %	1180256-1	Groundmass	Kerguelen Plateau	Dan Miggins	9.4	FCT-NM (7B27-14)	28.201	0.082	Kuiper et al (2008)	8.99878	0.114	0.00174661	0.114	303.357	0.116	0.993516587	0.065	1	4.8E-14	2	APR	2015	15	19	1	14-OSU-07	0.00	0.00	39.40
15D10250	10.5 %	1180256-1	Groundmass	Kerguelen Plateau	Dan Miggins	10.5	FCT-NM (7B27-14)	28.201	0.082	Kuiper et al (2008)	8.99878	0.114	0.00174661	0.114	303.357	0.116	0.993516587	0.065	1	4.8E-14	2	APR	2015	15	44	1	14-OSU-07	0.00	0.00	39.40
15D10251	11.7 %	1180256-1	Groundmass	Kerguelen Plateau	Dan Miggins	11.7	FCT-NM (7B27-14)	28.201	0.082	Kuiper et al (2008)	8.99878	0.114	0.00174661	0.114	303.357	0.116	0.993516587	0.065	1	4.8E-14	2	APR	2015	15	56	1	14-OSU-07	0.00	0.00	39.40
15D10252	13.1 %	1180256-1	Groundmass	Kerguelen Plateau	Dan Miggins	13.1	FCT-NM (7B27-14)	28.201	0.082	Kuiper et al (2008)	8.99878	0.114	0.00174661	0.114	303.357	0.116	0.993516587	0.065	1	4.8E-14	2	APR	2015	16	9	1	14-OSU-07	0.00	0.00	39.40
15D10254	14.7 %	1180256-1	Groundmass	Kerguelen Plateau	Dan Miggins	14.7	FCT-NM (7B27-14)	28.201	0.082	Kuiper et al (2008)	8.99878	0.114	0.00174661	0.114	303.357	0.116	0.993516587	0.065	1	4.8E-14	2	APR	2015	16	34	1	14-OSU-07	0.00	0.00	39.40
15D10255	16.5 %	1180256-1	Groundmass	Kerguelen Plateau	Dan Miggins	16.5	FCT-NM (7B27-14)	28.201	0.082	Kuiper et al (2008)	8.99878	0.114	0.00174661	0.114	303.357	0.116	0.993516587	0.065	1	4.8E-14	2	APR	2015	16	46	1	14-OSU-07	0.00	0.00	39.40
15D10256	18.5 %	1180256-1	Groundmass	Kerguelen Plateau	Dan Miggins	18.5	FCT-NM (7B27-14)	28.201	0.082	Kuiper et al (2008)	8.99878	0.114	0.00174661	0.114	303.357	0.116	0.993516587	0.065	1	4.8E-14	2	APR	2015	16	59	1	14-OSU-07	0.00	0.00	39.40
15D10258	19.8 %	1180256-1	Groundmass	Kerguelen Plateau	Dan Miggins	19.8	FCT-NM (7B27-14)	28.201	0.082	Kuiper et al (2008)	8.99878	0.114	0.00174661	0.114	303.357	0.116	0.993516587	0.065	1	4.8E-14	2	APR	2015	17	25	1	14-OSU-07	0.00	0.00	39.40
15D10259	21.7 %	1180256-1	Groundmass	Kerguelen Plateau	Dan Miggins	21.7	FCT-NM (7B27-14)	28.201	0.082	Kuiper et al (2008)	8.99878	0.114	0.00174661	0.114	303.357	0.116	0.993516587	0.065	1	4.8E-14	2	APR	2015	17	38	1	14-OSU-07	0.00	0.00	39.40
15D10260	22.8 %	1180256-1	Groundmass	Kerguelen Plateau	Dan Miggins	22.8	FCT-NM (7B27-14)	28.201	0.082	Kuiper et al (2008)	8.99878	0.114	0.00174661	0.114	303.357	0.116	0.993516587	0.065	1	4.8E-14	2	APR	2015	17	51	1	14-OSU-07	0.00	0.00	39.40
15D10262	24.3 %	1180256-1	Groundmass	Kerguelen Plateau	Dan Miggins	24.3	FCT-NM (7B27-14)	28.201	0.082	Kuiper et al (2008)	8.99878	0.114	0.00174661	0.114	303.357	0.116	0.993516587	0.065	1	4.8E-14	2	APR	2015	18	16	1	14-OSU-07	0.00	0.00	39.40



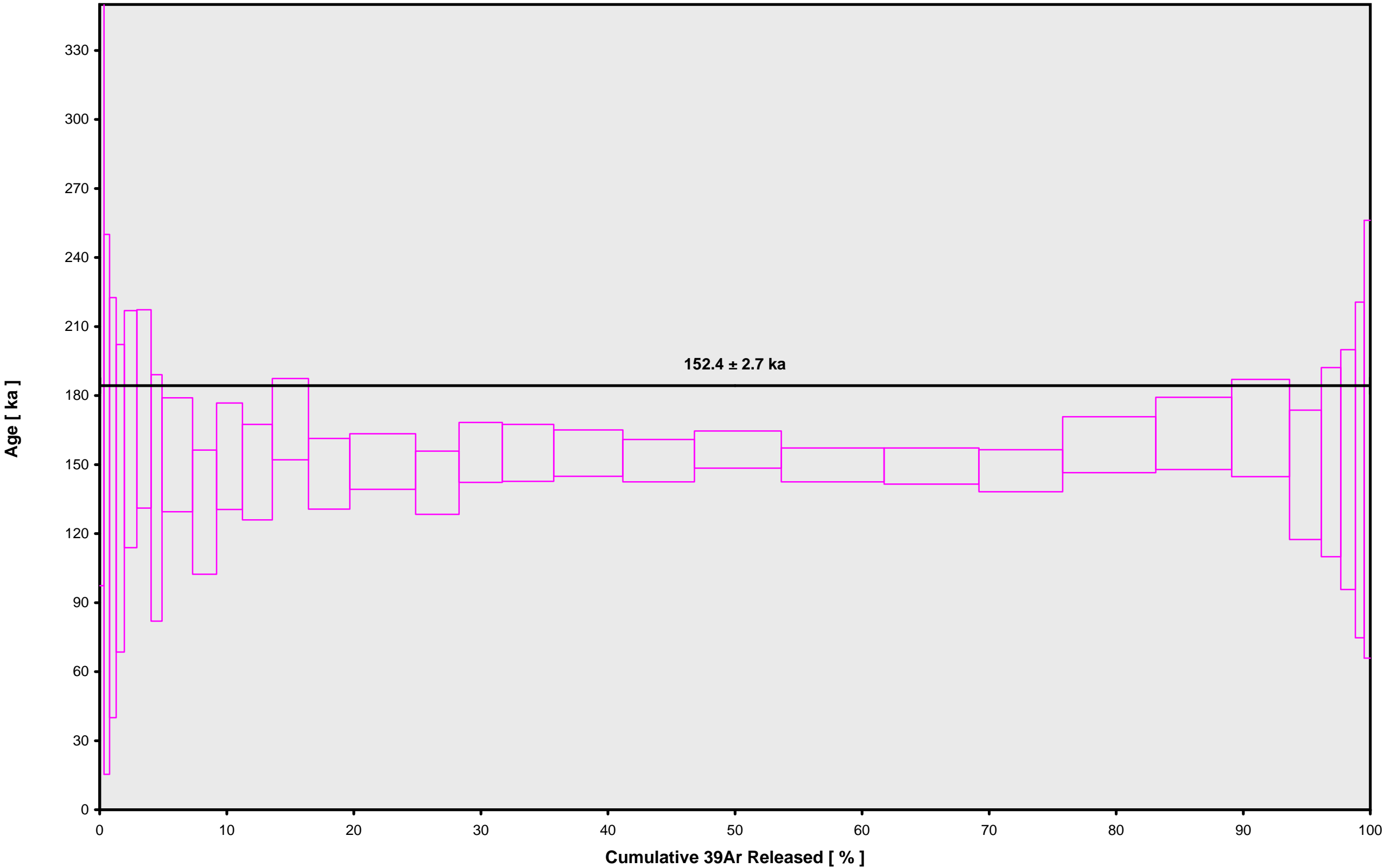
[illegible]



OSU Argon Geochronology Lab																											
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	
15D10222	2.0 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D10224	2.2 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D10225	2.4 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D10226	2.6 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D10228	2.8 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D10229	3.0 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D10230	3.3 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D10231	3.6 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D10233	3.9 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D10234	4.3 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D10235	4.6 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D10236	4.9 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D10238	5.2 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D10239	5.5 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D10240	5.8 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D10242	6.1 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D10243	6.5 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D10244	7.0 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D10246	7.6 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D10247	8.4 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D10248	9.4 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D10250	10.5 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D10251	11.7 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D10252	13.1 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D10254	14.7 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D10255	16.5 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D10256	18.5 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D10258	19.8 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D10259	21.7 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D10260	22.8 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D10262	24.3 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0



15D10221.AGE >>> 1180256-1 >>> KERGUELEN | FALLOON (14-PIL-01) PROJECT



Ar-Ages in ka

WEIGHTED PLATEAU

$152.4 \pm 2.7$

TOTAL FUSION

$153.4 \pm 3.3$

NORMAL ISOCHRON

$150.2 \pm 4.5$

INVERSE ISOCHRON

$150.3 \pm 4.5$

MSWD (PROBABILITY)

0.77 (81%)

Sample Info

Groundmass

Kerguelen Plateau

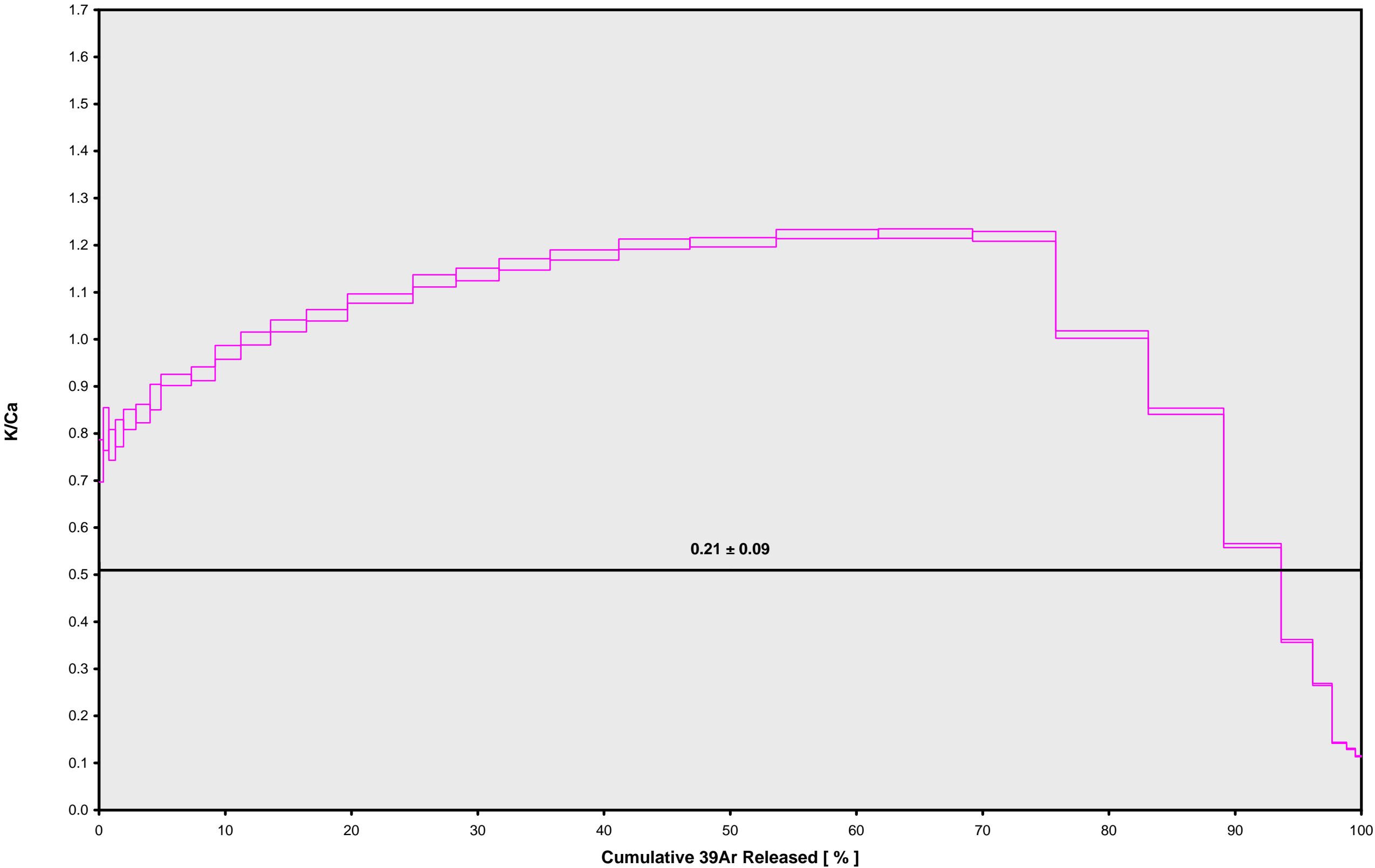
Dan Miggins

IRR = 14-OSU-07 (7B27-14)

J =  $0.00174661 \pm 0.00000199$



15D10221.AGE >>> 1180256-1 >>> KERGUELEN | FALLOON (14-PIL-01) PROJECT



Ar-Ages in ka

WEIGHTED PLATEAU

152.4 ± 2.7

TOTAL FUSION

153.4 ± 3.3

NORMAL ISOCHRON

150.2 ± 4.5

INVERSE ISOCHRON

150.3 ± 4.5

Sample Info

Groundmass

Kerguelen Plateau

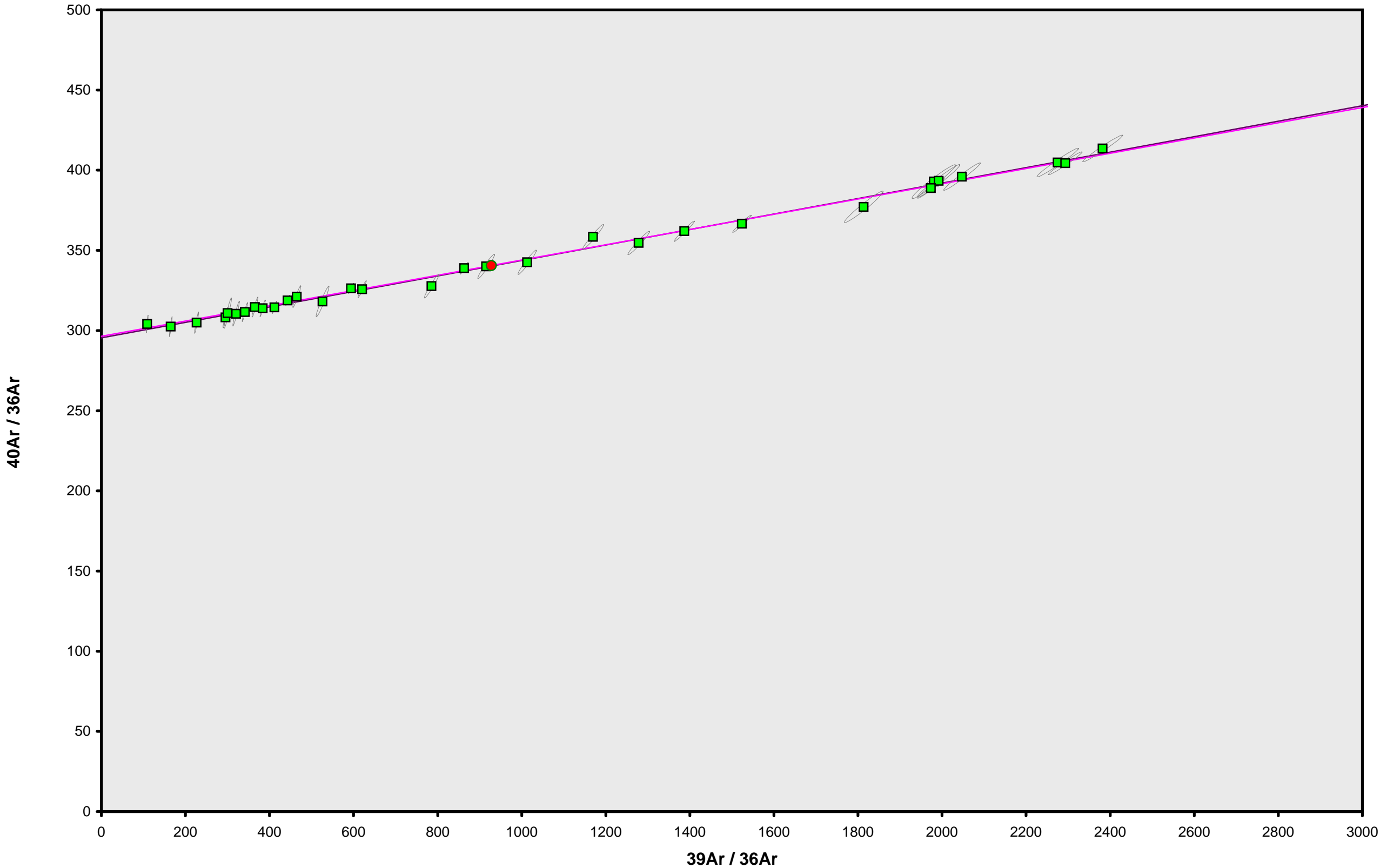
Dan Miggins

IRR = 14-OSU-07 (7B27-14)

J = 0.00174661 ± 0.00000199



15D10221.AGE >>> 1180256-1 >>> KERGUELEN | FALLOON (14-PIL-01) PROJECT



Ar-Ages in ka

WEIGHTED PLATEAU

152.4 ± 2.7

TOTAL FUSION

153.4 ± 3.3

NORMAL ISOCHRON

150.2 ± 4.5

INVERSE ISOCHRON

150.3 ± 4.5

MSWD (PROBABILITY)

0.75 (83%)

40AR/36AR INTERCEPT

296.4 ± 1.6

Sample Info

Groundmass

Kerguelen Plateau

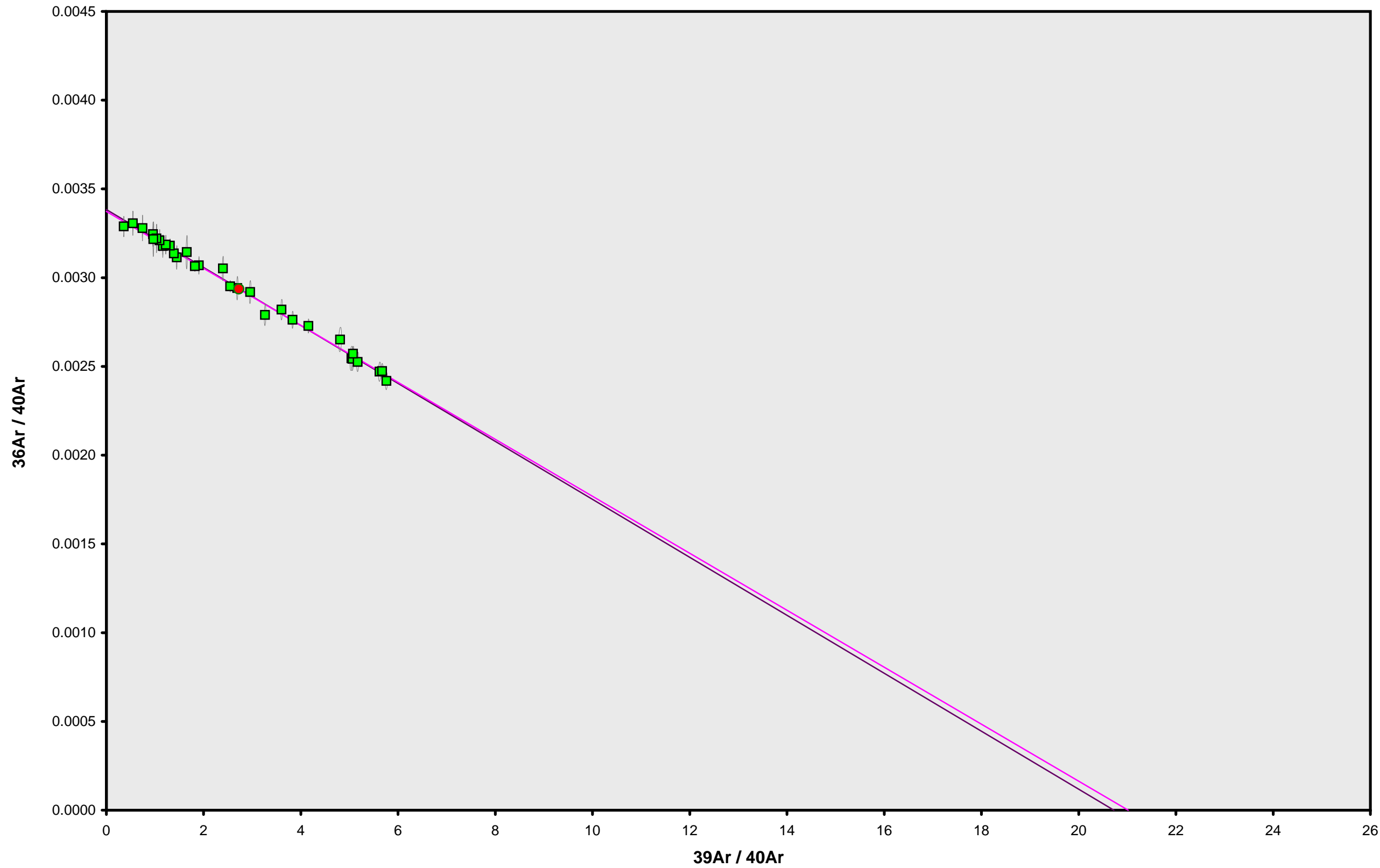
Dan Miggins

IRR = 14-OSU-07 (7B27-14)

J = 0.00174661 ± 0.00000199



15D10221.AGE >>> 1180256-1 >>> KERGUELEN | FALLOON (14-PIL-01) PROJECT



**Ar-Ages in ka**

**WEIGHTED PLATEAU**  
152.4 ± 2.7

**TOTAL FUSION**  
153.4 ± 3.3

**NORMAL ISOCHRON**  
150.2 ± 4.5

**INVERSE ISOCHRON**  
150.3 ± 4.5

**MSWD (PROBABILITY)**  
0.75 (83%)

**SPREADING FACTOR**  
25.7%

**40AR/36AR INTERCEPT**  
296.4 ± 1.6

**Sample Info**

Groundmass  
Kerguelen Plateau  
Dan Miggins

IRR = 14-OSU-07 (7B27-14)  
J = 0.00174661 ± 0.00000199



Incremental Heating		36Ar(a) [fA]	37Ar(ca) [fA]	38Ar(cl) [fA]	39Ar(k) [fA]	40Ar(r) [fA]	Age ± 2σ (ka)	40Ar(r) (%)	39Ar(k) (%)	K/Ca ± 2σ
15D10130	2.0 %	0.1761959	27.8154	0.765978	53.1089	6.03360	368.3 ± 44.5	10.38	1.05	0.82 ± 0.02
15D10132	2.2 %	0.1319569	27.2343	0.597179	52.2171	5.51425	342.4 ± 44.1	12.37	1.03	0.82 ± 0.02
15D10133	2.4 %	0.1279854	34.0590	0.563025	65.0019	6.62305	330.3 ± 37.0	14.88	1.29	0.82 ± 0.01
15D10134	2.6 %	0.1112429	37.0304	0.452721	72.9579	7.52957	334.6 ± 31.0	18.60	1.44	0.85 ± 0.01
15D10136	2.8 %	0.0946614	43.4490	0.418201	82.3935	8.81827	347.0 ± 24.0	23.91	1.63	0.82 ± 0.01
15D10137	3.0 %	0.1217945	63.1786	0.436463	119.3314	11.17389	303.6 ± 19.6	23.63	2.36	0.81 ± 0.01
15D10138	3.3 %	0.0862471	59.4244	0.329955	109.3623	10.76491	319.1 ± 18.6	29.61	2.16	0.79 ± 0.01
15D10139	3.6 %	0.0944640	82.8794	0.293551	147.7701	14.25608	312.8 ± 13.6	33.69	2.92	0.77 ± 0.01
15D10141	3.9 %	0.1639117	182.4110	0.516825	315.7758	32.85112	337.3 ± 8.3	40.26	6.25	0.74 ± 0.01
15D10142	4.3 %	✓ 0.1614608	244.6292	0.579666	425.7729	42.81937	326.0 ± 6.3	47.07	8.42	0.75 ± 0.01
15D10143	4.6 %	✓ 0.0866528	147.2330	0.278754	268.8843	26.53084	319.9 ± 8.3	50.62	5.32	0.79 ± 0.01
15D10144	4.9 %	✓ 0.1220443	191.2915	0.398926	387.5543	37.99828	317.9 ± 6.1	51.04	7.67	0.87 ± 0.01
15D10146	5.2 %	✓ 0.0889562	132.9944	0.344276	300.2064	29.66672	320.4 ± 7.6	52.73	5.94	0.97 ± 0.01
15D10147	5.5 %	✓ 0.0940551	125.2590	0.335063	306.8597	29.73549	314.2 ± 7.1	51.41	6.07	1.05 ± 0.01
15D10148	5.8 %	✓ 0.0880208	108.1652	0.395741	282.2714	27.59206	316.9 ± 7.9	51.20	5.58	1.12 ± 0.01
15D10150	6.1 %	✓ 0.0776075	89.2739	0.324683	244.1870	24.27074	322.2 ± 8.3	51.15	4.83	1.18 ± 0.01
15D10151	6.5 %	✓ 0.0617723	63.4247	0.222627	180.2892	17.27757	310.7 ± 9.7	48.38	3.57	1.22 ± 0.01
15D10152	7.0 %	✓ 0.0720188	69.6751	0.336674	197.3211	19.27774	316.7 ± 9.7	47.30	3.90	1.22 ± 0.01
15D10154	7.6 %	✓ 0.0926648	78.4274	0.423145	227.2011	22.12957	315.8 ± 9.2	44.49	4.49	1.25 ± 0.01
15D10155	8.4 %	✓ 0.0988338	74.3706	0.457709	215.1492	20.79973	313.4 ± 10.0	41.42	4.26	1.24 ± 0.01
15D10156	9.4 %	✓ 0.1407565	89.7757	0.789514	251.6502	24.61043	317.1 ± 10.0	37.03	4.98	1.21 ± 0.01
15D10158	10.5 %	✓ 0.1502562	80.1510	0.692542	213.8261	20.97261	318.0 ± 11.4	31.98	4.23	1.15 ± 0.01
15D10159	11.7 %	✓ 0.1469956	67.8771	0.615441	163.0474	15.39542	306.1 ± 14.2	26.10	3.23	1.03 ± 0.01
15D10160	13.1 %	✓ 0.1343548	51.5899	0.485205	120.2347	11.84340	319.3 ± 19.9	22.92	2.38	1.00 ± 0.01
15D10162	14.7 %	0.1528802	68.2749	0.411288	102.9130	9.30368	293.1 ± 23.2	17.04	2.04	0.65 ± 0.01
15D10163	16.5 %	0.0898396	57.5130	0.184857	47.6972	4.02774	273.8 ± 40.9	13.15	0.94	0.36 ± 0.00
15D10164	18.5 %	0.0666414	72.6334	0.208063	34.9481	2.56989	238.4 ± 56.0	11.53	0.69	0.21 ± 0.00
15D10166	19.8 %	0.0555957	54.3202	0.115692	23.2909	2.06568	287.5 ± 83.0	11.16	0.46	0.18 ± 0.00
15D10167	21.7 %	0.0469402	74.0937	0.177037	19.3897	1.74725	292.1 ± 88.8	11.17	0.38	0.11 ± 0.00
15D10168	22.8 %	0.0382137	57.7429	0.140314	14.1162	1.53275	352.0 ± 114.9	11.94	0.28	0.11 ± 0.00
15D10170	24.3 %	0.0365397	44.7614	0.134061	10.4989	0.98202	303.2 ± 162.7	8.33	0.21	0.10 ± 0.00
Σ		3.2115607	2600.9590	12.425173	5055.2282	496.71373				

Information on Analysis	Results	40(r)/39(k) ± 2σ	Age ± 2σ (ka)	MSWD	39Ar(k) (%,n)	K/Ca ± 2σ
Sample = 253-14 Material = Groundmass Location = Kerguelen Plateau Analyst = Dan Miggins Project = KERGUELEN   FALLOON (14-I Mass Discrimination Law = LIN Irradiation = 14-OSU-07 (7B20-14) J = 0.00179298 ± 0.00000210 FCT-NM = 28.201 ± 0.023 Ma	Age Plateau	0.09810 ± 0.00073 ± 0.74%	318.0 ± 2.5 ± 0.78%	1.12 34% 1.76 1.0564	74.86 15 2σ Confidence Limit Error Magnification	0.97 ± 0.09
	Total Fusion Age	0.09826 ± 0.00074 ± 0.76%	318.5 ± 2.5 ± 0.79%		31	0.84 ± 0.00



Normal Isochron		39(k)/36(a) ± 2σ		40(a+r)/36(a) ± 2σ	r.i.
15D10130	2.0 %	301.42 ± 4.17		329.74 ± 4.59	0.9726
15D10132	2.2 %	395.71 ± 7.09		337.29 ± 6.11	0.9768
15D10133	2.4 %	507.89 ± 9.81		347.25 ± 6.78	0.9807
15D10134	2.6 %	655.84 ± 13.65		363.19 ± 7.65	0.9809
15D10136	2.8 %	870.40 ± 18.44		388.66 ± 8.36	0.9791
15D10137	3.0 %	979.78 ± 19.25		387.24 ± 7.69	0.9839
15D10138	3.3 %	1268.01 ± 30.37		420.31 ± 10.20	0.9833
15D10139	3.6 %	1564.30 ± 33.91		446.42 ± 9.78	0.9849
15D10141	3.9 %	1926.50 ± 31.76		495.92 ± 8.20	0.9900
15D10142	4.3 %	2637.00 ± 45.04		560.70 ± 9.59	0.9920
15D10143	4.6 %	3103.01 ± 81.79		601.67 ± 15.94	0.9926
15D10144	4.9 %	3175.52 ± 63.22		606.85 ± 12.12	0.9925
15D10146	5.2 %	3374.77 ± 88.30		629.00 ± 16.52	0.9935
15D10147	5.5 %	3262.55 ± 77.29		611.65 ± 14.56	0.9923
15D10148	5.8 %	3206.87 ± 82.41		608.97 ± 15.72	0.9928
15D10150	6.1 %	3146.44 ± 82.94		608.24 ± 16.13	0.9915
15D10151	6.5 %	2918.61 ± 83.22		575.20 ± 16.56	0.9880
15D10152	7.0 %	2739.85 ± 73.51		563.18 ± 15.24	0.9891
15D10154	7.6 %	2451.86 ± 56.45		534.31 ± 12.38	0.9898
15D10155	8.4 %	2176.88 ± 48.02		505.95 ± 11.24	0.9890
15D10156	9.4 %	1787.84 ± 32.64		470.34 ± 8.63	0.9895
15D10158	10.5 %	1423.08 ± 23.74		435.08 ± 7.31	0.9867
15D10159	11.7 %	1109.20 ± 17.92		400.23 ± 6.52	0.9839
15D10160	13.1 %	894.90 ± 16.34		383.65 ± 7.07	0.9840
15D10162	14.7 %	673.16 ± 10.77		356.36 ± 5.76	0.9803
15D10163	16.5 %	530.91 ± 11.70		340.33 ± 7.65	0.9712
15D10164	18.5 %	524.42 ± 15.64		334.06 ± 10.17	0.9722
15D10166	19.8 %	418.93 ± 14.79		332.66 ± 11.99	0.9698
15D10167	21.7 %	413.07 ± 15.28		332.72 ± 12.63	0.9614
15D10168	22.8 %	369.40 ± 15.76		335.61 ± 14.72	0.9583
15D10170	24.3 %	287.33 ± 13.61		322.38 ± 15.63	0.9547

Results	40(a)/36(a) ± 2σ		40(r)/39(k) ± 2σ	Age ± 2σ (ka)	MSWD
Normal Isochron	293.43 ± 4.90 ± 1.67%		0.09886 ± 0.00204 ± 2.06%	320.5 ± 6.7 ± 2.08%	1.13
			Full External Error ± 9.8		
			Analytical Error ± 6.6		
Statistics	2σ Confidence Limit	1.78	Convergence	0.000000671550	
	Error Magnification	1.0644	Number of Iterations	8	
	Number of Data Points	15	Calculated Line	Weighted York-2	



Inverse Isochron		39(k)/40(a+r) ± 2σ		36(a)/40(a+r) ± 2σ	r.i.
15D10130	2.0 %	0.9141028 ± 0.0029700		0.00303266 ± 0.00004224	0.1471
15D10132	2.2 %	1.1732194 ± 0.0045639		0.00296482 ± 0.00005375	0.1594
15D10133	2.4 %	1.4625993 ± 0.0055885		0.00287978 ± 0.00005622	0.1535
15D10134	2.6 %	1.8058075 ± 0.0074005		0.00275341 ± 0.00005799	0.1593
15D10136	2.8 %	2.2395181 ± 0.0097968		0.00257297 ± 0.00005533	0.1750
15D10137	3.0 %	2.5301273 ± 0.0089685		0.00258235 ± 0.00005125	0.1461
15D10138	3.3 %	3.0168150 ± 0.0133358		0.00237917 ± 0.00005773	0.1609
15D10139	3.6 %	3.5041382 ± 0.0133132		0.00224007 ± 0.00004909	0.1485
15D10141	3.9 %	3.8847012 ± 0.0090689		0.00201646 ± 0.00003336	0.0950
15D10142	4.3 %	4.7030602 ± 0.0101406		0.00178349 ± 0.00003052	0.0782
15D10143	4.6 %	5.1572899 ± 0.0165799		0.00166203 ± 0.00004402	0.1001
15D10144	4.9 %	5.2328096 ± 0.0128209		0.00164786 ± 0.00003291	0.0868
15D10146	5.2 %	5.3653064 ± 0.0160400		0.00158983 ± 0.00004176	0.0909
15D10147	5.5 %	5.3340232 ± 0.0157131		0.00163492 ± 0.00003891	0.0984
15D10148	5.8 %	5.2660412 ± 0.0163112		0.00164211 ± 0.00004239	0.0976
15D10150	6.1 %	5.1730429 ± 0.0178524		0.00164410 ± 0.00004359	0.1101
15D10151	6.5 %	5.0740973 ± 0.0225493		0.00173853 ± 0.00005005	0.1389
15D10152	7.0 %	4.8650018 ± 0.0194164		0.00177564 ± 0.00004804	0.1296
15D10154	7.6 %	4.5888064 ± 0.0151674		0.00187156 ± 0.00004338	0.1185
15D10155	8.4 %	4.3025426 ± 0.0141738		0.00197647 ± 0.00004391	0.1226
15D10156	9.4 %	3.8011343 ± 0.0100823		0.00212610 ± 0.00003902	0.1066
15D10158	10.5 %	3.2708461 ± 0.0089451		0.00229843 ± 0.00003861	0.1224
15D10159	11.7 %	2.7713775 ± 0.0080731		0.00249854 ± 0.00004072	0.1376
15D10160	13.1 %	2.3326048 ± 0.0076589		0.00260654 ± 0.00004806	0.1421
15D10162	14.7 %	1.8890125 ± 0.0060433		0.00280618 ± 0.00004539	0.1534
15D10163	16.5 %	1.5599879 ± 0.0083519		0.00293830 ± 0.00006603	0.2003
15D10164	18.5 %	1.5698243 ± 0.0111835		0.00299345 ± 0.00009111	0.2033
15D10166	19.8 %	1.2593638 ± 0.0110727		0.00300611 ± 0.00010833	0.2051
15D10167	21.7 %	1.2414930 ± 0.0129836		0.00300550 ± 0.00011413	0.2306
15D10168	22.8 %	1.1006911 ± 0.0138097		0.00297965 ± 0.00013072	0.2375
15D10170	24.3 %	0.8912878 ± 0.0128920		0.00310197 ± 0.00015037	0.2249

Results	40(a)/36(a) ± 2σ		40(r)/39(k) ± 2σ	Age ± 2σ (ka)	MSWD
Inverse Isochron	293.43 ± 4.92 ± 1.68%		0.09890 ± 0.00204 ± 2.07%	320.6 ± 6.7 ± 2.08%	1.14 32%
	Full External Error ± 9.8				
	Analytical Error ± 6.6				
Statistics	2σ Confidence Limit	1.78	Convergence	0.0102691859	
	Error Magnification	1.0680	Number of Iterations	2	
	Number of Data Points	15	Calculated Line	Weighted York-2	
	Spreading Factor	30.0%			



OSU Argon Geochronology Lab																
Relative Abundances		36Ar [fA]	%1σ	37Ar [fA]	%1σ	38Ar [fA]	%1σ	39Ar [fA]	%1σ	40Ar [fA]	%1σ	40(r)/39(k) ± 2σ	Age ± 2σ (ka)	40Ar(r) (%)	39Ar(k) (%)	K/Ca ± 2σ
15D10130	2.0 %	0.1836523	0.655	27.8154	0.992	1.403675	2.842	53.1276	0.099	58.1531	0.129	0.11361 ± 0.01371	368.3 ± 44.5	10.38	1.05	0.82 ± 0.02
15D10132	2.2 %	0.1392350	0.843	27.2343	1.034	1.216451	3.067	52.2354	0.099	44.5603	0.167	0.10560 ± 0.01361	342.4 ± 44.1	12.37	1.03	0.82 ± 0.02
15D10133	2.4 %	0.1370602	0.896	34.0590	0.812	1.327141	3.052	65.0248	0.089	44.5084	0.169	0.10189 ± 0.01143	330.3 ± 37.0	14.88	1.29	0.82 ± 0.01
15D10134	2.6 %	0.1210858	0.950	37.0304	0.792	1.304288	2.920	72.9829	0.087	40.4755	0.185	0.10320 ± 0.00957	334.6 ± 31.0	18.60	1.44	0.85 ± 0.01
15D10136	2.8 %	0.1061937	0.938	43.4490	0.675	1.374135	2.956	82.4227	0.082	36.8739	0.202	0.10703 ± 0.00740	347.0 ± 24.0	23.91	1.63	0.82 ± 0.01
15D10137	3.0 %	0.1385382	0.859	63.1786	0.522	1.818096	2.084	119.3739	0.076	47.2847	0.160	0.09364 ± 0.00604	303.6 ± 19.6	23.63	2.36	0.81 ± 0.01
15D10138	3.3 %	0.1019839	1.007	59.4244	0.563	1.591443	2.400	109.4023	0.076	36.3614	0.207	0.09843 ± 0.00574	319.1 ± 18.6	29.61	2.16	0.79 ± 0.01
15D10139	3.6 %	0.1163875	0.874	82.8794	0.449	1.993983	1.992	147.8259	0.072	42.3194	0.175	0.09647 ± 0.00421	312.8 ± 13.6	33.69	2.92	0.77 ± 0.01
15D10141	3.9 %	0.2121446	0.630	182.4110	0.359	4.143524	0.905	315.8985	0.067	81.6060	0.095	0.10403 ± 0.00257	337.3 ± 8.3	40.26	6.25	0.74 ± 0.01
15D10142	4.3 %	✓ 0.2261286	0.600	244.6292	0.345	5.458539	0.701	425.9376	0.066	90.9611	0.085	0.10057 ± 0.00195	326.0 ± 6.3	47.07	8.42	0.75 ± 0.01
15D10143	4.6 %	✓ 0.1255636	0.901	147.2330	0.376	3.356899	1.090	268.9834	0.067	52.4083	0.145	0.09867 ± 0.00257	319.9 ± 8.3	50.62	5.32	0.79 ± 0.01
15D10144	4.9 %	✓ 0.1726043	0.695	191.2915	0.357	4.834763	0.798	387.6831	0.066	74.4538	0.103	0.09805 ± 0.00189	317.9 ± 6.1	51.04	7.67	0.87 ± 0.01
15D10146	5.2 %	✓ 0.1241176	0.930	132.9944	0.377	3.779099	1.031	300.2959	0.067	56.2565	0.133	0.09882 ± 0.00235	320.4 ± 7.6	52.73	5.94	0.97 ± 0.01
15D10147	5.5 %	✓ 0.1271730	0.869	125.2590	0.389	3.846447	0.980	306.9440	0.067	57.8387	0.131	0.09690 ± 0.00220	314.2 ± 7.1	51.41	6.07	1.05 ± 0.01
15D10148	5.8 %	✓ 0.1166350	0.963	108.1652	0.410	3.625944	1.071	282.3442	0.067	53.8873	0.139	0.09775 ± 0.00243	316.9 ± 7.9	51.20	5.58	1.12 ± 0.01
15D10150	6.1 %	✓ 0.1012239	1.004	89.2739	0.450	3.119277	1.312	244.2471	0.068	47.4504	0.158	0.09939 ± 0.00255	322.2 ± 8.3	51.15	4.83	1.18 ± 0.01
15D10151	6.5 %	✓ 0.0785494	1.114	63.4247	0.534	2.286745	1.694	180.3319	0.070	35.7134	0.210	0.09583 ± 0.00300	310.7 ± 9.7	48.38	3.57	1.22 ± 0.01
15D10152	7.0 %	✓ 0.0904629	1.061	69.6751	0.513	2.596616	1.537	197.3680	0.070	40.7586	0.186	0.09770 ± 0.00299	316.7 ± 9.7	47.30	3.90	1.22 ± 0.01
15D10154	7.6 %	✓ 0.1134323	0.935	78.4274	0.472	3.027102	1.260	227.2539	0.068	49.7415	0.150	0.09740 ± 0.00285	315.8 ± 9.2	44.49	4.49	1.25 ± 0.01
15D10155	8.4 %	✓ 0.1185355	0.914	74.3706	0.476	2.925613	1.309	215.1993	0.068	50.2224	0.149	0.09668 ± 0.00307	313.4 ± 10.0	41.42	4.26	1.24 ± 0.01
15D10156	9.4 %	✓ 0.1645742	0.776	89.7757	0.436	3.680849	1.016	251.7107	0.068	66.4581	0.113	0.09780 ± 0.00307	317.1 ± 10.0	37.03	4.98	1.21 ± 0.01
15D10158	10.5 %	✓ 0.1715187	0.726	80.1510	0.460	3.155080	1.281	213.8800	0.068	65.5893	0.118	0.09808 ± 0.00353	318.0 ± 11.4	31.98	4.23	1.15 ± 0.01
15D10159	11.7 %	✓ 0.1650063	0.715	67.8771	0.495	2.499337	1.488	163.0931	0.070	58.9973	0.127	0.09442 ± 0.00439	306.1 ± 14.2	26.10	3.23	1.03 ± 0.01
15D10160	13.1 %	✓ 0.1480464	0.824	51.5899	0.592	1.879304	2.078	120.2694	0.074	51.6667	0.146	0.09850 ± 0.00614	319.3 ± 19.9	22.92	2.38	1.00 ± 0.01
15D10162	14.7 %	0.1709657	0.710	68.2749	0.497	1.611960	2.328	102.9589	0.076	54.5837	0.141	0.09040 ± 0.00715	293.1 ± 23.2	17.04	2.04	0.65 ± 0.01
15D10163	16.5 %	0.1050505	0.934	57.5130	0.579	0.745241	5.157	47.7359	0.107	30.6235	0.245	0.08444 ± 0.01261	273.8 ± 40.9	13.15	0.94	0.36 ± 0.00
15D10164	18.5 %	0.0858475	1.148	72.6334	0.484	0.619238	6.092	34.9970	0.129	22.2977	0.331	0.07353 ± 0.01726	238.4 ± 56.0	11.53	0.69	0.21 ± 0.00
15D10166	19.8 %	0.0699534	1.390	54.3202	0.610	0.391888	9.311	23.3275	0.175	18.5177	0.403	0.08869 ± 0.02559	287.5 ± 83.0	11.16	0.46	0.18 ± 0.00
15D10167	21.7 %	0.0665272	1.288	74.0937	0.492	0.407495	9.095	19.4396	0.210	15.6377	0.478	0.09011 ± 0.02740	292.1 ± 88.8	11.17	0.38	0.11 ± 0.00
15D10168	22.8 %	0.0534786	1.504	57.7429	0.578	0.308902	12.309	14.1551	0.258	12.8391	0.571	0.10858 ± 0.03544	352.0 ± 114.9	11.94	0.28	0.11 ± 0.00
15D10170	24.3 %	0.0483766	1.760	44.7614	0.696	0.260990	15.016	10.5290	0.358	11.7901	0.627	0.09353 ± 0.05018	303.2 ± 162.7	8.33	0.21	0.10 ± 0.00
Σ		3.9000521	0.158	2600.9590	0.089	70.590064	0.304	5056.9786	0.015	1450.8357	0.029					

Information on Analysis and Constants Used in Calculations	Results	40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (ka)	MSWD	39Ar(k) (% ,n)	K/Ca ± 2σ
Sample = 253-14	Age Plateau		0.09810 ± 0.00073 ± 0.74%	318.0 ± 2.5 ± 0.78%	1.12 34%	74.86 15	0.97 ± 0.09
Material = Groundmass							
Location = Kerguelen Plateau							
Analyst = Dan Miggins	Total Fusion Age		0.09826 ± 0.00074 ± 0.76%	318.5 ± 2.5 ± 0.79%	1.76 1.0564	2σ Confidence Limit Error Magnification	
Project = KERGUELEN   FALLOON (14-PIL-01)							
Mass Discrimination Law = LIN							
Irradiation = 14-OSU-07 (7B20-14)	Normal Isochron	293.43 ± 4.90 ± 1.67%	0.09886 ± 0.00204 ± 2.06%	320.5 ± 6.7 ± 2.08%	1.13 32%	74.86 15	0.84 ± 0.00
J = 0.00179298 ± 0.00000210							
FCT-NM = 28.201 ± 0.023 Ma							
IGSN = Undefined	Inverse Isochron	293.43 ± 4.92 ± 1.68%	0.09890 ± 0.00204 ± 2.07%	320.6 ± 6.7 ± 2.08%	1.78 1.0644	2σ Confidence Limit Error Magnification	
Preferred Age = Undefined							
Classification = Undefined							
Experiment Type = Incremental Heating					0.0000006716	8 Number of Iterations Convergence	
Extraction Method = Undefined							
Heating = 77 sec							
Isolation = 6.00 min							
Instrument = ARGUS-VI-D							
Lithology = Undefined							
Lat-Lon = Undefined - Undefined							
Collector Calibrations = 40Ar 36Ar							



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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	
15D10130	2.0 %		0.1761959	0.68	0.00000000	0.00	0.00734333	0.99	0.0001131	5.29	27.8154	0.99	0.0329310	0.68	0.00000000	0.00	0.604379	0.10	0.0003866	0.99	0.765978	5.37	53.1089	0.10	0.0187198	0.99	6.03360	6.03	52.06590	0.68	0.00000000	0.00	0.0536400	0.10
15D10132	2.2 %		0.1319569	0.89	0.00000000	0.00	0.0071899	1.03	0.0000882	6.32	27.2343	1.03	0.0246628	0.89	0.00000000	0.00	0.594231	0.10	0.0003786	1.03	0.597179	6.38	52.2171	0.10	0.0183287	1.03	5.51425	6.44	38.99328	0.89	0.00000000	0.00	0.0527393	0.10
15D10133	2.4 %		0.1279854	0.96	0.00000000	0.00	0.0089916	0.81	0.0000832	7.25	34.0590	0.81	0.0239205	0.96	0.00000000	0.00	0.739722	0.09	0.0004734	0.81	0.563025	7.31	65.0019	0.09	0.0229217	0.81	6.62305	5.61	37.81968	0.96	0.00000000	0.00	0.0656519	0.09
15D10134	2.6 %		0.1112429	1.04	0.00000000	0.00	0.0097760	0.79	0.0000669	8.46	37.0304	0.79	0.0207913	1.04	0.00000000	0.00	0.830261	0.09	0.0005147	0.79	0.452721	8.51	72.9579	0.09	0.0249215	0.79	7.52957	4.63	32.87227	1.04	0.00000000	0.00	0.0736875	0.09
15D10136	2.8 %		0.0946614	1.06	0.00000000	0.00	0.0114705	0.67	0.0000618	9.76	43.4490	0.67	0.0176922	1.06	0.00000000	0.00	0.937638	0.08	0.0006039	0.67	0.418201	9.80	82.3935	0.08	0.0292412	0.67	8.81827	3.45	27.97244	1.06	0.00000000	0.00	0.0832174	0.08
15D10137	3.0 %		0.1217945	0.98	0.00000000	0.00	0.0166791	0.52	0.0000645	8.73	63.1786	0.52	0.0227634	0.98	0.00000000	0.00	1.357991	0.08	0.0008782	0.52	0.436463	8.78	119.3314	0.08	0.0425192	0.52	11.17389	3.23	35.99029	0.98	0.00000000	0.00	0.1205247	0.08
15D10138	3.3 %		0.0862471	1.20	0.00000000	0.00	0.0156881	0.56	0.0000488	11.62	59.4244	0.56	0.0161196	1.20	0.00000000	0.00	1.244543	0.08	0.0008260	0.56	0.329955	11.65	109.3623	0.08	0.0399926	0.56	10.76491	2.92	25.48602	1.20	0.00000000	0.00	0.1104559	0.08
15D10139	3.6 %		0.0944640	1.08	0.00000000	0.00	0.0218802	0.45	0.0000434	13.57	82.8794	0.45	0.0176553	1.08	0.00000000	0.00	1.681624	0.07	0.0011520	0.45	0.293551	13.60	147.7701	0.07	0.0557778	0.45	14.25608	2.18	27.91410	1.08	0.00000000	0.00	0.1492478	0.07
15D10141	3.9 %		0.1639117	0.82	0.00000000	0.00	0.0481565	0.36	0.0000764	7.33	182.4110	0.36	0.0306351	0.82	0.00000000	0.00	3.593528	0.07	0.0025355	0.36	0.516825	7.39	315.7758	0.07	0.1227626	0.36	32.85112	1.23	48.43590	0.82	0.00000000	0.00	0.3189335	0.07
15D10142	4.3 %	✓	0.1614608	0.85	0.00000000	0.00	0.0645821	0.35	0.0000857	6.69	244.6292	0.35	0.0301770	0.85	0.00000000	0.00	4.845296	0.07	0.0034003	0.35	0.579666	6.75	425.7729	0.07	0.1646354	0.35	42.81937	0.97	47.71167	0.85	0.00000000	0.00	0.4300306	0.07
15D10143	4.6 %	✓	0.0866528	1.32	0.00000000	0.00	0.0388695	0.38	0.0000412	13.18	147.2330	0.38	0.0161954	1.32	0.00000000	0.00	3.059903	0.07	0.0020465	0.38	0.278754	13.21	268.8843	0.07	0.0990878	0.38	26.53084	1.30	25.60591	1.32	0.00000000	0.00	0.2715731	0.07
15D10144	4.9 %	✓	0.1220443	0.99	0.00000000	0.00	0.0505010	0.36	0.0000590	9.74	191.2915	0.36	0.0228101	0.99	0.00000000	0.00	4.410368	0.07	0.0026590	0.36	0.398926	9.79	387.5543	0.07	0.1287392	0.36	37.99828	0.96	36.06410	0.99	0.00000000	0.00	0.3914299	0.07
15D10146	5.2 %	✓	0.0889562	1.31	0.00000000	0.00	0.0351105	0.38	0.0000509	11.37	132.9944	0.38	0.0166259	1.31	0.00000000	0.00	3.416349	0.07	0.0018486	0.38	0.344276	11.41	300.2064	0.07	0.0895052	0.38	29.66672	1.18	26.28654	1.31	0.00000000	0.00	0.3032085	0.07
15D10147	5.5 %	✓	0.0940551	1.18	0.00000000	0.00	0.0330684	0.39	0.0000496	11.31	125.2590	0.39	0.0175789	1.18	0.00000000	0.00	3.492063	0.07	0.0017411	0.39	0.335063	11.35	306.8597	0.07	0.0842993	0.39	29.73549	1.13	27.79327	1.18	0.00000000	0.00	0.3099283	0.07
15D10148	5.8 %	✓	0.0880208	1.28	0.00000000	0.00	0.0285556	0.41	0.0000586	9.88	108.1652	0.41	0.0164511	1.28	0.00000000	0.00	3.212248	0.07	0.0015035	0.41	0.395741	9.92	282.2714	0.07	0.0727952	0.41	27.59206	1.24	26.01014	1.28	0.00000000	0.00	0.2850941	0.07
15D10150	6.1 %	✓	0.0776075	1.32	0.00000000	0.00	0.0235683	0.45	0.0000480	12.65	89.2739	0.45	0.0145048	1.32	0.00000000	0.00	2.778848	0.07	0.0012409	0.45	0.324683	12.69	244.1870	0.07	0.0600814	0.45	24.27074	1.28	22.93301	1.32	0.00000000	0.00	0.2466289	0.07
15D10151	6.5 %	✓	0.0617723	1.42	0.00000000	0.00	0.0167441	0.53	0.0000329	17.44	63.4247	0.53	0.0115452	1.42	0.00000000	0.00	2.051691	0.07	0.0008816	0.53	0.222627	17.46	180.2892	0.07	0.0426848	0.53	17.27757	1.57	18.25372	1.42	0.00000000	0.00	0.1820921	0.07
15D10152	7.0 %	✓	0.0720188	1.34	0.00000000	0.00	0.0183942	0.51	0.0000498	11.90	69.6751	0.51	0.0134603	1.34	0.00000000	0.00	2.245514	0.07	0.0009685	0.51	0.336674	11.93	197.3211	0.07	0.0468913	0.51	19.27774	1.53	21.28156	1.34	0.00000000	0.00	0.1992943	0.07
15D10154	7.6 %	✓	0.0926648	1.15	0.00000000	0.00	0.0207048	0.47	0.0000626	9.07	78.4274	0.47	0.0173191	1.15	0.00000000	0.00	2.585548	0.07	0.0010901	0.47	0.423145	9.12	227.2011	0.07	0.0527817	0.47	22.12957	1.46	27.38245	1.15	0.00000000	0.00	0.2294731	0.07
15D10155	8.4 %	✓	0.0988338	1.10	0.00000000	0.00	0.0196338	0.48	0.0000678	8.43	74.3706	0.48	0.0184720	1.10	0.00000000	0.00	2.448398	0.07	0.0010338	0.48	0.457709	8.48	215.1492	0.07	0.0500514	0.48	20.79973	1.59	29.20540	1.10	0.00000000	0.00	0.2173007	0.07
15D10156	9.4 %	✓	0.1407565	0.91	0.00000000	0.00	0.0237008	0.44	0.0001169	4.83	89.7757	0.44	0.0263074	0.91	0.00000000	0.00	2.863780	0.07	0.0012479	0.44	0.789514	4.92	251.6502	0.07	0.0604190	0.44	24.61043	1.57	41.59355	0.91	0.00000000	0.00	0.2541667	0.07
15D10158	10.5 %	✓	0.1502562	0.83	0.00000000	0.00	0.0211599	0.46	0.0001026	5.91	80.1510	0.46	0.0280829	0.83	0.00000000	0.00	2.433341	0.07	0.0011141	0.46	0.692542	5.98	213.8261	0.07	0.0539416	0.46	20.97261	1.80	44.40072	0.83	0.00000000	0.00	0.2159644	0.07
15D10159	11.7 %	✓	0.1469956	0.80	0.00000000	0.00	0.0179196	0.50	0.0000912	6.12	67.8771	0.50	0.0274735	0.80	0.00000000	0.00	1.855479	0.07	0.0009435	0.50	0.615441	6.19	163.0474	0.07	0.0456813	0.50	15.39542	2.32	43.43719	0.80	0.0000000			



Additional Parameters		40Ar/39Ar	1σ	37Ar/39Ar	1σ	36Ar/39Ar	1σ	Time (days)	37Ar (decay)	39Ar (decay)	40Ar (moles)
15D10130	2.0 %	1.094593	0.001777	0.523558	0.005219	0.003457	0.000023	90.944	6.042325	1.00064279	2.791E-12
15D10132	2.2 %	0.853066	0.001658	0.521376	0.005416	0.002666	0.000023	90.963	6.044564	1.00064292	2.139E-12
15D10133	2.4 %	0.684483	0.001306	0.523785	0.004279	0.002108	0.000019	90.972	6.045724	1.00064299	2.136E-12
15D10134	2.6 %	0.554589	0.001135	0.507385	0.004041	0.001659	0.000016	90.983	6.046968	1.00064306	1.943E-12
15D10136	2.8 %	0.447376	0.000977	0.527149	0.003584	0.001288	0.000012	91.001	6.049125	1.00064319	1.770E-12
15D10137	3.0 %	0.396106	0.000701	0.529250	0.002793	0.001161	0.000010	91.010	6.050287	1.00064326	2.270E-12
15D10138	3.3 %	0.332364	0.000733	0.543173	0.003085	0.000932	0.000009	91.020	6.051449	1.00064333	1.745E-12
15D10139	3.6 %	0.286279	0.000542	0.560655	0.002547	0.000787	0.000007	91.030	6.052611	1.00064340	2.031E-12
15D10141	3.9 %	0.258330	0.000301	0.577435	0.002111	0.000672	0.000004	91.048	6.054770	1.00064352	3.917E-12
15D10142	4.3 %	✓	0.213555	0.000230	0.574331	0.002018	0.000003	91.057	6.055850	1.00064359	4.366E-12
15D10143	4.6 %	✓	0.194838	0.000312	0.547369	0.002093	0.000467	91.066	6.056930	1.00064365	2.516E-12
15D10144	4.9 %	✓	0.192048	0.000234	0.493422	0.001791	0.000445	91.074	6.057927	1.00064371	3.574E-12
15D10146	5.2 %	✓	0.187337	0.000279	0.442878	0.001695	0.000413	91.092	6.060005	1.00064383	2.700E-12
15D10147	5.5 %	✓	0.188434	0.000276	0.408084	0.001610	0.000044	91.101	6.061085	1.00064390	2.776E-12
15D10148	5.8 %	✓	0.190857	0.000294	0.383097	0.001590	0.000413	91.109	6.062083	1.00064395	2.587E-12
15D10150	6.1 %	✓	0.194272	0.000334	0.365507	0.001665	0.000414	91.126	6.064162	1.00064408	2.278E-12
15D10151	6.5 %	✓	0.198043	0.000438	0.351711	0.001895	0.000436	91.135	6.065244	1.00064414	1.714E-12
15D10152	7.0 %	✓	0.206511	0.000410	0.353021	0.001827	0.000458	91.144	6.066242	1.00064420	1.956E-12
15D10154	7.6 %	✓	0.218881	0.000360	0.345109	0.001645	0.000499	91.161	6.068323	1.00064432	2.388E-12
15D10155	8.4 %	✓	0.233376	0.000383	0.345590	0.001663	0.000551	91.170	6.069405	1.00064439	2.411E-12
15D10156	9.4 %	✓	0.264026	0.000349	0.356662	0.001574	0.000654	91.178	6.070404	1.00064444	3.190E-12
15D10158	10.5 %	✓	0.306664	0.000418	0.374748	0.001743	0.000802	91.196	6.072486	1.00064457	3.148E-12
15D10159	11.7 %	✓	0.361740	0.000526	0.416186	0.002081	0.001012	91.205	6.073569	1.00064463	2.832E-12
15D10160	13.1 %	✓	0.429591	0.000704	0.428953	0.002559	0.001231	91.213	6.074569	1.00064469	2.480E-12
15D10162	14.7 %		0.530150	0.000847	0.663127	0.003335	0.001661	91.231	6.076652	1.00064481	2.620E-12
15D10163	16.5 %		0.641520	0.001715	1.204817	0.007089	0.002201	91.240	6.077736	1.00064488	1.470E-12
15D10164	18.5 %		0.637133	0.002266	2.075419	0.010386	0.002453	91.249	6.078820	1.00064494	1.070E-12
15D10166	19.8 %		0.793816	0.003485	2.328592	0.014785	0.002999	91.266	6.080905	1.00064506	8.889E-13
15D10167	21.7 %		0.804423	0.004200	3.811479	0.020395	0.003422	91.275	6.081989	1.00064513	7.506E-13
15D10168	22.8 %		0.907033	0.005682	4.079301	0.025812	0.003778	91.284	6.083074	1.00064519	6.163E-13
15D10170	24.3 %		1.119769	0.008087	4.251226	0.033265	0.004595	91.302	6.085243	1.00064532	5.659E-13



Procedure Blanks		36Ar [fA]	1σ	37Ar [fA]	1σ	38Ar [fA]	1σ	39Ar [fA]	1σ	40Ar [fA]	1σ
15D10130	2.0 %	0.0154357	0.0004497	0.0021603	0.0300292	0.0141256	0.0265266	0.0085437	0.0256007	4.6332377	0.0687609
15D10132	2.2 %	0.0150303	0.0004497	0.0011413	0.0300292	0.0009289	0.0265266	0.0103223	0.0256007	4.5467036	0.0687609
15D10133	2.4 %	0.0148350	0.0004497	0.0024786	0.0300292	0.0050891	0.0265266	0.0117327	0.0256007	4.5040403	0.0687609
15D10134	2.6 %	0.0146370	0.0004497	0.0036275	0.0300292	0.0073550	0.0265266	0.0132969	0.0256007	4.4600014	0.0687609
15D10136	2.8 %	0.0143214	0.0004497	0.0049232	0.0300292	0.0071507	0.0265266	0.0155578	0.0256007	4.3877647	0.0687609
15D10137	3.0 %	0.0141660	0.0004497	0.0052553	0.0300292	0.0054606	0.0265266	0.0163136	0.0256007	4.3510204	0.0687609
15D10138	3.3 %	0.0140208	0.0004497	0.0053316	0.0300292	0.0030292	0.0265266	0.0166471	0.0256007	4.3157827	0.0687609
15D10139	3.6 %	0.0138857	0.0004497	0.0051521	0.0300292	0.0001066	0.0265266	0.0165232	0.0256007	4.2820517	0.0687609
15D10141	3.9 %	0.0136617	0.0004497	0.0041398	0.0300292	0.0058711	0.0265266	0.0151046	0.0256007	4.2234056	0.0687609
15D10142	4.3 %	0.0135629	0.0004497	0.0033027	0.0300292	0.0088210	0.0265266	0.0138959	0.0256007	4.1960313	0.0687609
15D10143	4.6 %	0.0134728	0.0004497	0.0022450	0.0300292	0.0115766	0.0265266	0.0124503	0.0256007	4.1699560	0.0687609
15D10144	4.9 %	0.0133975	0.0004497	0.0010729	0.0300292	0.0138594	0.0265266	0.0109957	0.0256007	4.1470396	0.0687609
15D10146	5.2 %	0.0132644	0.0004497	0.0019727	0.0300292	0.0175354	0.0265266	0.0080690	0.0256007	4.1028524	0.0687609
15D10147	5.5 %	0.0132080	0.0004497	0.0038789	0.0300292	0.0187669	0.0265266	0.0069149	0.0256007	4.0817737	0.0687609
15D10148	5.8 %	0.0131638	0.0004497	0.0058343	0.0300292	0.0194545	0.0265266	0.0062977	0.0256007	4.0634696	0.0687609
15D10150	6.1 %	0.0130955	0.0004497	0.0105117	0.0300292	0.0194889	0.0265266	0.0072181	0.0256007	4.0288911	0.0687609
15D10151	6.5 %	0.0130728	0.0004497	0.0132664	0.0300292	0.0187971	0.0265266	0.0093738	0.0256007	4.0128090	0.0687609
15D10152	7.0 %	0.0130597	0.0004497	0.0160050	0.0300292	0.0177766	0.0265266	0.0127203	0.0256007	3.9991171	0.0687609
15D10154	7.6 %	0.0130562	0.0004497	0.0223141	0.0300292	0.0147221	0.0265266	0.0250488	0.0256007	3.9741475	0.0687609
15D10155	8.4 %	0.0130672	0.0004497	0.0259173	0.0300292	0.0128153	0.0265266	0.0350059	0.0256007	3.9630620	0.0687609
15D10156	9.4 %	0.0130851	0.0004497	0.0294391	0.0300292	0.0109959	0.0265266	0.0468021	0.0256007	3.9539823	0.0687609
15D10158	10.5 %	0.0131465	0.0004497	0.0373800	0.0300292	0.0075348	0.0265266	0.0809329	0.0256007	3.9386214	0.0687609
15D10159	11.7 %	0.0131912	0.0004497	0.0418317	0.0300292	0.0062286	0.0265266	0.1046561	0.0256007	3.9325325	0.0687609
15D10160	13.1 %	0.0132402	0.0004497	0.0461368	0.0300292	0.0055419	0.0265266	0.1307479	0.0256007	3.9280650	0.0687609
15D10162	14.7 %	0.0133663	0.0004497	0.0557094	0.0300292	0.0064864	0.0265266	0.1999081	0.0256007	3.9223130	0.0687609
15D10163	16.5 %	0.0134447	0.0004497	0.0610096	0.0300292	0.0087039	0.0265266	0.2448355	0.0256007	3.9212207	0.0687609
15D10164	18.5 %	0.0135318	0.0004497	0.0665305	0.0300292	0.0124529	0.0265266	0.2966760	0.0256007	3.9214275	0.0687609
15D10166	19.8 %	0.0137240	0.0004497	0.0777675	0.0300292	0.0250569	0.0265266	0.4181311	0.0256007	3.9254764	0.0687609
15D10167	21.7 %	0.0138368	0.0004497	0.0839332	0.0300292	0.0350283	0.0265266	0.4938770	0.0256007	3.9294806	0.0687609
15D10168	22.8 %	0.0139583	0.0004497	0.0903194	0.0300292	0.0477881	0.0265266	0.5791494	0.0256007	3.9347839	0.0687609
15D10170	24.3 %	0.0142275	0.0004497	0.1037539	0.0300292	0.0831657	0.0265266	0.7812191	0.0256007	3.9492878	0.0687609



OSU Argon Geochronology Lab																					
Intercept Values		36Ar [fA]	1σ	r2		37Ar [fA]	1σ	r2		38Ar [fA]	1σ	r2		39Ar [fA]	1σ	r2		40Ar [fA]	1σ	r2	
15D10130	2.0 %	0.1877752	0.0009197	0.4014	EXP 150 of 150	4.5156	0.0298	0.3854	EXP 150 of 150	1.371234	0.029035	0.0498	EXP 150 of 150	52.7563	0.0298	0.9928	EXP 150 of 150	62.95709	0.03024	0.1714	EXP 150 of 150
15D10132	2.2 %	0.1456886	0.0009372	0.2374	EXP 150 of 150	4.4164	0.0313	0.4179	EXP 150 of 150	1.201507	0.025487	0.0822	EXP 150 of 150	51.8722	0.0289	0.9929	EXP 150 of 150	49.23779	0.02943	0.8518	EXP 150 of 150
15D10133	2.4 %	0.1434524	0.0009995	0.1842	EXP 150 of 150	5.5210	0.0281	0.5711	EXP 149 of 150	1.314913	0.029853	0.0835	EXP 150 of 150	64.5716	0.0296	0.9953	EXP 150 of 150	49.14309	0.03089	0.8776	EXP 150 of 150
15D10134	2.6 %	0.1282640	0.0009294	0.0743	EXP 150 of 150	6.0005	0.0313	0.4934	EXP 150 of 150	1.294625	0.026569	0.0651	EXP 150 of 150	72.4742	0.0338	0.9952	EXP 150 of 150	45.05435	0.03019	0.9249	EXP 150 of 150
15D10136	2.8 %	0.1139737	0.0007717	0.0260	EXP 149 of 150	7.0374	0.0289	0.6616	EXP 150 of 150	1.363355	0.030011	0.0996	EXP 150 of 150	81.8489	0.0318	0.9966	EXP 150 of 150	41.36995	0.02953	0.9412	EXP 150 of 150
15D10137	3.0 %	0.1441704	0.0009560	0.1967	EXP 150 of 150	10.2329	0.0293	0.7979	EXP 150 of 150	1.799834	0.026256	0.1006	EXP 150 of 150	118.5365	0.0385	0.9976	EXP 150 of 150	51.77454	0.03187	0.8905	EXP 150 of 150
15D10138	3.3 %	0.1097226	0.0008099	0.0473	EXP 150 of 150	9.6226	0.0326	0.7299	EXP 150 of 150	1.573707	0.026710	0.1481	EXP 149 of 150	108.6366	0.0336	0.9978	EXP 150 of 150	40.78391	0.03117	0.9518	EXP 149 of 150
15D10139	3.6 %	0.1231038	0.0007852	0.1869	EXP 150 of 150	13.4204	0.0288	0.8796	EXP 150 of 150	1.968072	0.028743	0.1100	EXP 150 of 150	146.7853	0.0382	0.9985	EXP 150 of 150	46.72571	0.02822	0.9527	EXP 150 of 150
15D10141	3.9 %	0.2127385	0.0010325	0.2681	EXP 150 of 150	29.5338	0.0346	0.9613	EXP 150 of 150	4.083588	0.025248	0.4157	EXP 150 of 150	313.6545	0.0429	0.9996	EXP 150 of 150	86.06893	0.03684	0.3932	EXP 150 of 150
15D10142	4.3 %	0.2257623	0.0010367	0.2761	EXP 150 of 150	39.6026	0.0360	0.9750	EXP 150 of 150	5.378494	0.025948	0.5867	EXP 150 of 150	422.9053	0.0558	0.9996	EXP 150 of 150	95.42413	0.03471	0.6890	EXP 150 of 150
15D10143	4.6 %	0.1313018	0.0009042	0.0028	EXP 150 of 150	23.8308	0.0343	0.9406	EXP 150 of 150	3.301521	0.024126	0.4070	EXP 150 of 150	267.0722	0.0424	0.9994	EXP 150 of 150	56.73213	0.03301	0.9620	EXP 150 of 150
15D10144	4.9 %	0.1753695	0.0009287	0.1050	EXP 149 of 150	30.9587	0.0350	0.9612	EXP 150 of 150	4.757819	0.026600	0.5213	EXP 149 of 150	384.9215	0.0468	0.9997	EXP 150 of 150	78.81942	0.03348	0.9228	EXP 150 of 150
15D10146	5.2 %	0.1297365	0.0009314	0.0006	EXP 150 of 150	21.5192	0.0284	0.9470	EXP 149 of 150	3.712254	0.027391	0.4366	EXP 150 of 150	298.1563	0.0464	0.9995	EXP 150 of 150	60.52447	0.02969	0.9621	EXP 150 of 150
15D10147	5.5 %	0.1325474	0.0008736	0.0417	EXP 150 of 150	20.2660	0.0314	0.9306	EXP 150 of 150	3.777491	0.025632	0.4062	EXP 150 of 150	304.7557	0.0422	0.9996	EXP 150 of 150	62.09025	0.03168	0.9588	EXP 150 of 150
15D10148	5.8 %	0.1226142	0.0009037	0.0064	EXP 149 of 150	17.5000	0.0318	0.9088	EXP 150 of 150	3.559178	0.027289	0.4060	EXP 150 of 150	280.3312	0.0399	0.9995	EXP 150 of 150	58.10896	0.03005	0.9638	EXP 149 of 150
15D10150	6.1 %	0.1080841	0.0007981	0.0286	EXP 150 of 150	14.4443	0.0337	0.8663	EXP 150 of 150	3.059087	0.030203	0.2084	EXP 150 of 150	242.5075	0.0401	0.9994	EXP 150 of 150	51.61857	0.03023	0.9622	EXP 150 of 150
15D10151	6.5 %	0.0867837	0.0006555	0.0049	EXP 149 of 150	10.2659	0.0315	0.7782	EXP 150 of 150	2.238110	0.027370	0.1472	EXP 150 of 150	179.0515	0.0415	0.9988	EXP 150 of 150	39.83103	0.03020	0.9745	EXP 150 of 150
15D10152	7.0 %	0.0979501	0.0007442	0.0002	EXP 150 of 150	11.2772	0.0332	0.7819	EXP 150 of 150	2.544959	0.028924	0.1838	EXP 150 of 150	195.9691	0.0428	0.9989	EXP 150 of 150	44.87737	0.03250	0.9620	EXP 150 of 150
15D10154	7.6 %	0.1195012	0.0008369	0.0652	EXP 150 of 150	12.6938	0.0313	0.8478	EXP 149 of 150	2.972882	0.026441	0.3106	EXP 150 of 150	225.6535	0.0387	0.9993	EXP 150 of 150	53.86167	0.02938	0.9526	EXP 150 of 150
15D10155	8.4 %	0.1243010	0.0008585	0.0368	EXP 150 of 150	12.0398	0.0292	0.8385	EXP 150 of 150	2.874624	0.026670	0.2428	EXP 150 of 150	213.6951	0.0402	0.9992	EXP 150 of 150	54.33294	0.03018	0.9464	EXP 150 of 150
15D10156	9.4 %	0.1675218	0.0010257	0.1078	EXP 150 of 150	14.5294	0.0297	0.8781	EXP 150 of 150	3.621825	0.025226	0.4566	EXP 150 of 150	249.9571	0.0450	0.9993	EXP 150 of 150	70.60723	0.03129	0.7991	EXP 150 of 150
15D10158	10.5 %	0.1740998	0.0009826	0.2335	EXP 150 of 150	12.9784	0.0297	0.8638	EXP 150 of 150	3.106377	0.029508	0.2232	EXP 150 of 150	212.4312	0.0371	0.9993	EXP 150 of 150	69.72046	0.03612	0.5416	EXP 150 of 150
15D10159	11.7 %	0.1680333	0.0009165	0.3476	EXP 150 of 150	10.9992	0.0279	0.8266	EXP 149 of 150	2.460496	0.025175	0.2482	EXP 150 of 150	162.0312	0.0338	0.9990	EXP 150 of 150	63.10302	0.03085	0.7684	EXP 150 of 150
15D10160	13.1 %	0.1521671	0.0009803	0.1533	EXP 150 of 150	8.3729	0.0282	0.7405	EXP 149 of 150	1.849241	0.027865	0.1689	EXP 150 of 150	119.5399	0.0337	0.9982	EXP 150 of 150	55.74643	0.03181	0.8104	EXP 150 of 150
15D10162	14.7 %	0.1738007	0.0009484	0.3596	EXP 150 of 150	11.0717	0.0286	0.8238	EXP 150 of 150	1.584440	0.025757	0.0874	EXP 150 of 150	102.4224	0.0310	0.9979	EXP 150 of 150	58.66628	0.03449	0.5838	EXP 150 of 150
15D10163	16.5 %	0.1120241	0.0007552	0.1114	EXP 150 of 150	9.3389	0.0328	0.7356	EXP 150 of 150	0.726814	0.027100	0.0121	EXP 150 of 150	47.6393	0.0310	0.9903	EXP 150 of 150	34.63465	0.03059	0.9481	EXP 150 of 150
15D10164	18.5 %	0.0940912	0.0007761	0.0668	EXP 150 of 150	11.7816	0.0293	0.8453	EXP 150 of 150	0.598705	0.026115	0.0421	EXP 150 of 150	35.0433	0.0291	0.9836	EXP 150 of 150	26.28461	0.02765	0.9735	EXP 149 of 150
15D10166	19.8 %	0.0793684	0.0007725	0.0063	EXP 150 of 150	8.8361	0.0339	0.6989	EXP 150 of 150	0.361718	0.024353	0.0075	EXP 150 of 150	23.5788	0.0277	0.9671	EXP 150 of 150	22.49758	0.02933	0.9706	EXP 150 of 150
15D10167	21.7 %	0.0762659	0.0006435	0.0011	EXP 150 of 150	12.0283	0.0324	0.8136	EXP 150 of 150	0.367150	0.025178	0.0709	EXP 150 of 150	19.7944	0.0289	0.9488	EXP 150 of 150	19.61306	0.02981	0.9750	EXP 150 of 150
15D10168	22.8 %	0.0641427	0.0005896	0.0121	EXP 150 of 150	9.3972	0.0328	0.6996	EXP 150 of 150	0.257083	0.026540	0.0123	EXP 150 of 150	14.6330	0.0239	0.9358	EXP 150 of 150	16.81162	0.02603	0.9821	EXP 150 of 150
15D10170	24.3 %	0.0596242	0.0006478	0.0003	EXP 150 of 150	7.3157	0.0327	0.6156	EXP 150 of 150	0.174419	0.028148	0.0146	EXP 150 of 150	11.2349	0.0264	0.8638	EXP 150 of 150	15.77400	0.02784	0.9795	EXP 150 of 150



OSU Argon Geochronology Lab																														
Sample Parameters		Sample	Material	Location	Analyst	Temp	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	Irradiation	X-pos	Y-pos	Z/H-pos
15D10130	2.0 %	253-14	Groundmass	Kerguelen Plateau	Dan Miggins	2	FCT-NM (7B20-14)	28.201	0.082	Kuiper et al (2008)	8.76608	0.117	0.00179298	0.117	303.409	0.117	0.993474796	0.065	1	4.8E-14	1	APR	2015	13	45	1	14-OSU-07	0.00	0.00	26.44
15D10132	2.2 %	253-14	Groundmass	Kerguelen Plateau	Dan Miggins	2.2	FCT-NM (7B20-14)	28.201	0.082	Kuiper et al (2008)	8.76608	0.117	0.00179298	0.117	303.409	0.117	0.993474796	0.065	1	4.8E-14	1	APR	2015	14	12	1	14-OSU-07	0.00	0.00	26.44
15D10133	2.4 %	253-14	Groundmass	Kerguelen Plateau	Dan Miggins	2.4	FCT-NM (7B20-14)	28.201	0.082	Kuiper et al (2008)	8.76608	0.117	0.00179298	0.117	303.409	0.117	0.993474796	0.065	1	4.8E-14	1	APR	2015	14	26	1	14-OSU-07	0.00	0.00	26.44
15D10134	2.6 %	253-14	Groundmass	Kerguelen Plateau	Dan Miggins	2.6	FCT-NM (7B20-14)	28.201	0.082	Kuiper et al (2008)	8.76608	0.117	0.00179298	0.117	303.409	0.117	0.993474796	0.065	1	4.8E-14	1	APR	2015	14	41	1	14-OSU-07	0.00	0.00	26.44
15D10136	2.8 %	253-14	Groundmass	Kerguelen Plateau	Dan Miggins	2.8	FCT-NM (7B20-14)	28.201	0.082	Kuiper et al (2008)	8.76608	0.117	0.00179298	0.117	303.409	0.117	0.993474796	0.065	1	4.8E-14	1	APR	2015	15	7	1	14-OSU-07	0.00	0.00	26.44
15D10137	3.0 %	253-14	Groundmass	Kerguelen Plateau	Dan Miggins	3	FCT-NM (7B20-14)	28.201	0.082	Kuiper et al (2008)	8.76608	0.117	0.00179298	0.117	303.409	0.117	0.993474796	0.065	1	4.8E-14	1	APR	2015	15	21	1	14-OSU-07	0.00	0.00	26.44
15D10138	3.3 %	253-14	Groundmass	Kerguelen Plateau	Dan Miggins	3.3	FCT-NM (7B20-14)	28.201	0.082	Kuiper et al (2008)	8.76608	0.117	0.00179298	0.117	303.409	0.117	0.993474796	0.065	1	4.8E-14	1	APR	2015	15	35	1	14-OSU-07	0.00	0.00	26.44
15D10139	3.6 %	253-14	Groundmass	Kerguelen Plateau	Dan Miggins	3.6	FCT-NM (7B20-14)	28.201	0.082	Kuiper et al (2008)	8.76608	0.117	0.00179298	0.117	303.409	0.117	0.993474796	0.065	1	4.8E-14	1	APR	2015	15	49	1	14-OSU-07	0.00	0.00	26.44
15D10141	3.9 %	253-14	Groundmass	Kerguelen Plateau	Dan Miggins	3.9	FCT-NM (7B20-14)	28.201	0.082	Kuiper et al (2008)	8.76608	0.117	0.00179298	0.117	303.409	0.117	0.993474796	0.065	1	4.8E-14	1	APR	2015	16	15	1	14-OSU-07	0.00	0.00	26.44
15D10142	4.3 %	253-14	Groundmass	Kerguelen Plateau	Dan Miggins	4.3	FCT-NM (7B20-14)	28.201	0.082	Kuiper et al (2008)	8.76608	0.117	0.00179298	0.117	303.409	0.117	0.993474796	0.065	1	4.8E-14	1	APR	2015	16	28	1	14-OSU-07	0.00	0.00	26.44
15D10143	4.6 %	253-14	Groundmass	Kerguelen Plateau	Dan Miggins	4.6	FCT-NM (7B20-14)	28.201	0.082	Kuiper et al (2008)	8.76608	0.117	0.00179298	0.117	303.409	0.117	0.993474796	0.065	1	4.8E-14	1	APR	2015	16	41	1	14-OSU-07	0.00	0.00	26.44
15D10144	4.9 %	253-14	Groundmass	Kerguelen Plateau	Dan Miggins	4.9	FCT-NM (7B20-14)	28.201	0.082	Kuiper et al (2008)	8.76608	0.117	0.00179298	0.117	303.409	0.117	0.993474796	0.065	1	4.8E-14	1	APR	2015	16	53	1	14-OSU-07	0.00	0.00	26.44
15D10146	5.2 %	253-14	Groundmass	Kerguelen Plateau	Dan Miggins	5.2	FCT-NM (7B20-14)	28.201	0.082	Kuiper et al (2008)	8.76608	0.117	0.00179298	0.117	303.409	0.117	0.993474796	0.065	1	4.8E-14	1	APR	2015	17	18	1	14-OSU-07	0.00	0.00	26.44
15D10147	5.5 %	253-14	Groundmass	Kerguelen Plateau	Dan Miggins	5.5	FCT-NM (7B20-14)	28.201	0.082	Kuiper et al (2008)	8.76608	0.117	0.00179298	0.117	303.409	0.117	0.993474796	0.065	1	4.8E-14	1	APR	2015	17	31	1	14-OSU-07	0.00	0.00	26.44
15D10148	5.8 %	253-14	Groundmass	Kerguelen Plateau	Dan Miggins	5.8	FCT-NM (7B20-14)	28.201	0.082	Kuiper et al (2008)	8.76608	0.117	0.00179298	0.117	303.409	0.117	0.993474796	0.065	1	4.8E-14	1	APR	2015	17	43	1	14-OSU-07	0.00	0.00	26.44
15D10150	6.1 %	253-14	Groundmass	Kerguelen Plateau	Dan Miggins	6.1	FCT-NM (7B20-14)	28.201	0.082	Kuiper et al (2008)	8.76608	0.117	0.00179298	0.117	303.409	0.117	0.993474796	0.065	1	4.8E-14	1	APR	2015	18	8	1	14-OSU-07	0.00	0.00	26.44
15D10151	6.5 %	253-14	Groundmass	Kerguelen Plateau	Dan Miggins	6.5	FCT-NM (7B20-14)	28.201	0.082	Kuiper et al (2008)	8.76608	0.117	0.00179298	0.117	303.409	0.117	0.993474796	0.065	1	4.8E-14	1	APR	2015	18	21	1	14-OSU-07	0.00	0.00	26.44
15D10152	7.0 %	253-14	Groundmass	Kerguelen Plateau	Dan Miggins	7	FCT-NM (7B20-14)	28.201	0.082	Kuiper et al (2008)	8.76608	0.117	0.00179298	0.117	303.409	0.117	0.993474796	0.065	1	4.8E-14	1	APR	2015	18	33	1	14-OSU-07	0.00	0.00	26.44
15D10154	7.6 %	253-14	Groundmass	Kerguelen Plateau	Dan Miggins	7.6	FCT-NM (7B20-14)	28.201	0.082	Kuiper et al (2008)	8.76608	0.117	0.00179298	0.117	303.409	0.117	0.993474796	0.065	1	4.8E-14	1	APR	2015	18	58	1	14-OSU-07	0.00	0.00	26.44
15D10155	8.4 %	253-14	Groundmass	Kerguelen Plateau	Dan Miggins	8.4	FCT-NM (7B20-14)	28.201	0.082	Kuiper et al (2008)	8.76608	0.117	0.00179298	0.117	303.409	0.117	0.993474796	0.065	1	4.8E-14	1	APR	2015	19	11	1	14-OSU-07	0.00	0.00	26.44
15D10156	9.4 %	253-14	Groundmass	Kerguelen Plateau	Dan Miggins	9.4	FCT-NM (7B20-14)	28.201	0.082	Kuiper et al (2008)	8.76608	0.117	0.00179298	0.117	303.409	0.117	0.993474796	0.065	1	4.8E-14	1	APR	2015	19	23	1	14-OSU-07	0.00	0.00	26.44
15D10158	10.5 %	253-14	Groundmass	Kerguelen Plateau	Dan Miggins	10.5	FCT-NM (7B20-14)	28.201	0.082	Kuiper et al (2008)	8.76608	0.117	0.00179298	0.117	303.409	0.117	0.993474796	0.065	1	4.8E-14	1	APR	2015	19	48	1	14-OSU-07	0.00	0.00	26.44
15D10159	11.7 %	253-14	Groundmass	Kerguelen Plateau	Dan Miggins	11.7	FCT-NM (7B20-14)	28.201	0.082	Kuiper et al (2008)	8.76608	0.117	0.00179298	0.117	303.409	0.117	0.993474796	0.065	1	4.8E-14	1	APR	2015	20	1	1	14-OSU-07	0.00	0.00	26.44
15D10160	13.1 %	253-14	Groundmass	Kerguelen Plateau	Dan Miggins	13.1	FCT-NM (7B20-14)	28.201	0.082	Kuiper et al (2008)	8.76608	0.117	0.00179298	0.117	303.409	0.117	0.993474796	0.065	1	4.8E-14	1	APR	2015	20	13	1	14-OSU-07	0.00	0.00	26.44
15D10162	14.7 %	253-14	Groundmass	Kerguelen Plateau	Dan Miggins	14.7	FCT-NM (7B20-14)	28.201	0.082	Kuiper et al (2008)	8.76608	0.117	0.00179298	0.117	303.409	0.117	0.993474796	0.065	1	4.8E-14	1	APR	2015	20	38	1	14-OSU-07	0.00	0.00	26.44
15D10163	16.5 %	253-14	Groundmass	Kerguelen Plateau	Dan Miggins	16.5	FCT-NM (7B20-14)	28.201	0.082	Kuiper et al (2008)	8.76608	0.117	0.00179298	0.117	303.409	0.117	0.993474796	0.065	1	4.8E-14	1	APR	2015	20	51	1	14-OSU-07	0.00	0.00	26.44
15D10164	18.5 %	253-14	Groundmass	Kerguelen Plateau	Dan Miggins	18.5	FCT-NM (7B20-14)	28.201	0.082	Kuiper et al (2008)	8.76608	0.117	0.00179298	0.117	303.409	0.117	0.993474796	0.065	1	4.8E-14	1	APR	2015	21	4	1	14-OSU-07	0.00	0.00	26.44
15D10166	19.8 %	253-14	Groundmass	Kerguelen Plateau	Dan Miggins	19.8	FCT-NM (7B20-14)	28.201	0.082	Kuiper et al (2008)	8.76608	0.117	0.00179298	0.117	303.409	0.117	0.993474796	0.065	1	4.8E-14	1	APR	2015	21	29	1	14-OSU-07	0.00	0.00	26.44
15D10167	21.7 %	253-14	Groundmass	Kerguelen Plateau	Dan Miggins	21.7	FCT-NM (7B20-14)	28.201	0.082	Kuiper et al (2008)	8.76608	0.117	0.00179298	0.117	303.409	0.117	0.993474796	0.065	1	4.8E-14	1	APR	2015	21	42	1	14-OSU-07	0.00	0.00	26.44
15D10168	22.8 %	253-14	Groundmass	Kerguelen Plateau	Dan Miggins	22.8	FCT-NM (7B20-14)	28.201	0.082	Kuiper et al (2008)	8.76608	0.117	0.00179298	0.117	303.409	0.117	0.993474796	0.065	1	4.8E-14	1	APR	2015	21	55	1	14-OSU-07	0.00	0.00	26.44
15D10170	24.3 %	253-14	Groundmass	Kerguelen Plateau	Dan Miggins	24.3	FCT-NM (7B20-14)	28.201	0.082	Kuiper et al (2008)	8.76608	0.117	0.00179298	0.117	303.409	0.117	0.993474796	0.065	1	4.8E-14	1	APR	2015	22	21	1	14-OSU-07	0.00	0.00	26.44



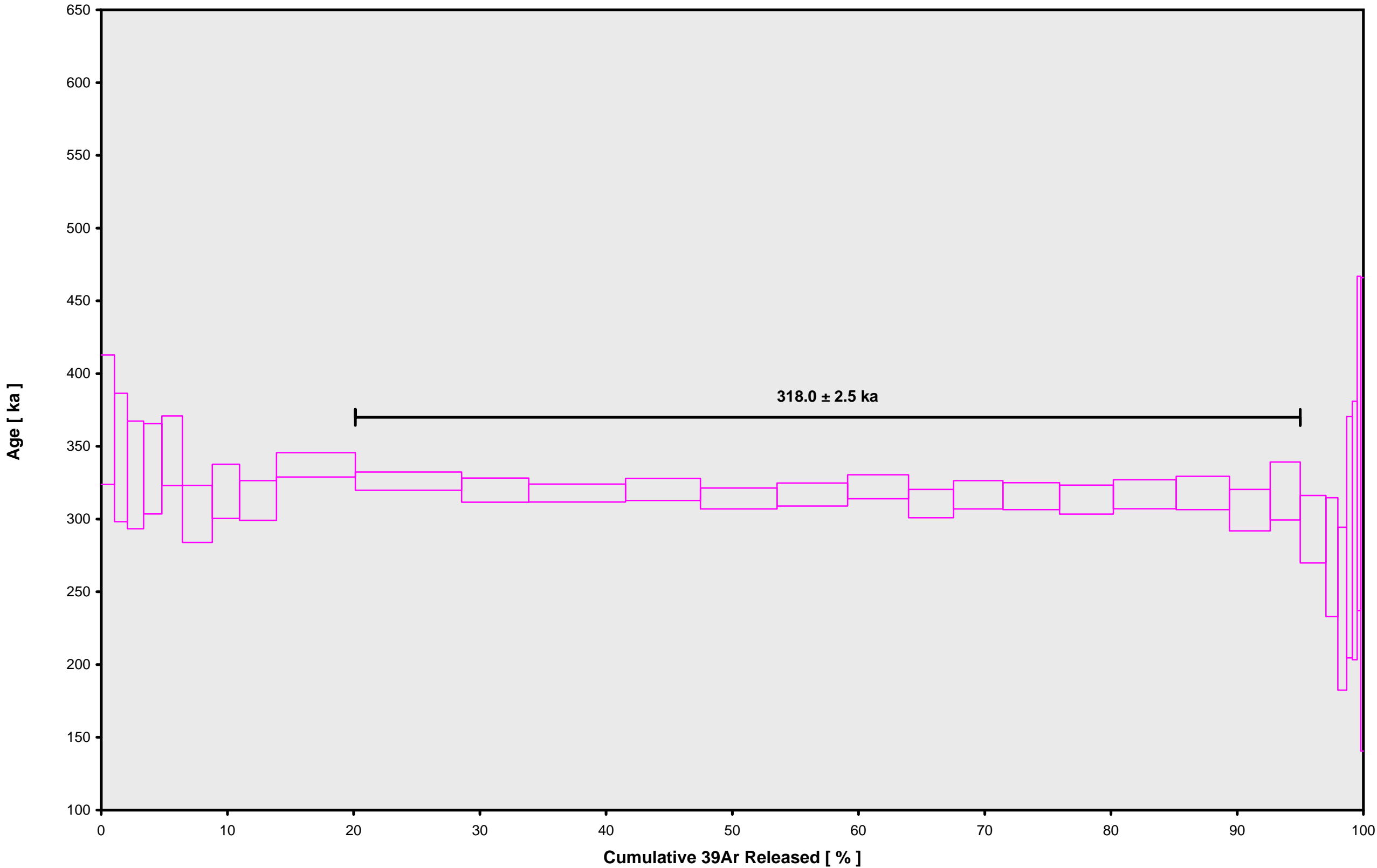
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15D10129.AGE >>> 253-14 >>> KERGUELEN | FALLOON (14-PIL-01) PROJECT



Ar-Ages in ka

WEIGHTED PLATEAU

$318.0 \pm 2.5$

TOTAL FUSION

$318.5 \pm 2.5$

NORMAL ISOCHRON

$320.5 \pm 6.7$

INVERSE ISOCHRON

$320.6 \pm 6.7$

MSWD (PROBABILITY)

1.12 (34%)

Sample Info

Groundmass

Kerguelen Plateau

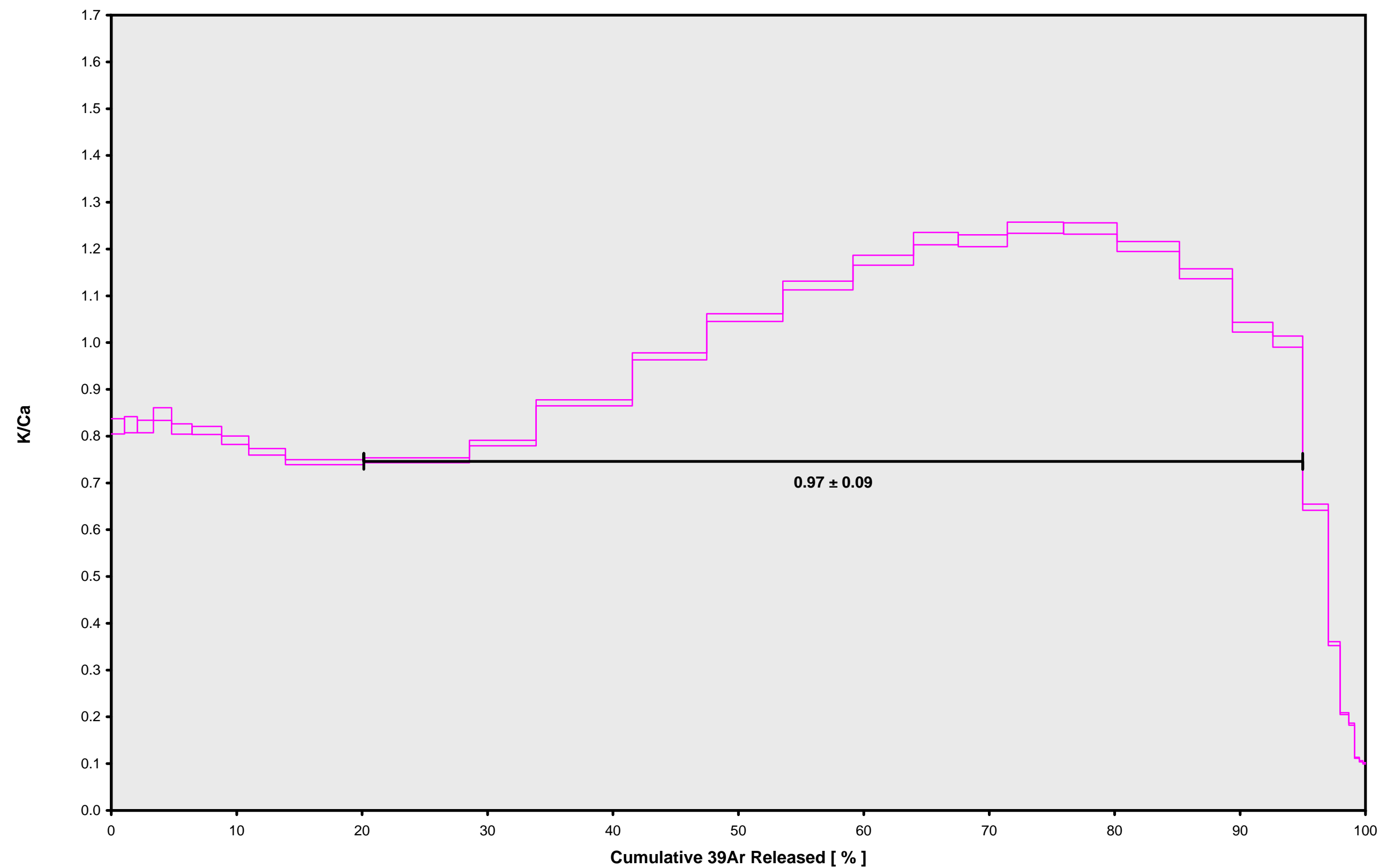
Dan Miggins

IRR = 14-OSU-07 (7B20-14)

J =  $0.00179298 \pm 0.00000210$



15D10129.AGE >>> 253-14 >>> KERGUELEN | FALLOON (14-PIL-01) PROJECT



**Ar-Ages in ka**

**WEIGHTED PLATEAU**

**$318.0 \pm 2.5$**

**TOTAL FUSION**

**$318.5 \pm 2.5$**

**NORMAL ISOCHRON**

**$320.5 \pm 6.7$**

**INVERSE ISOCHRON**

**$320.6 \pm 6.7$**

**Sample Info**

**Groundmass**

**Kerguelen Plateau**

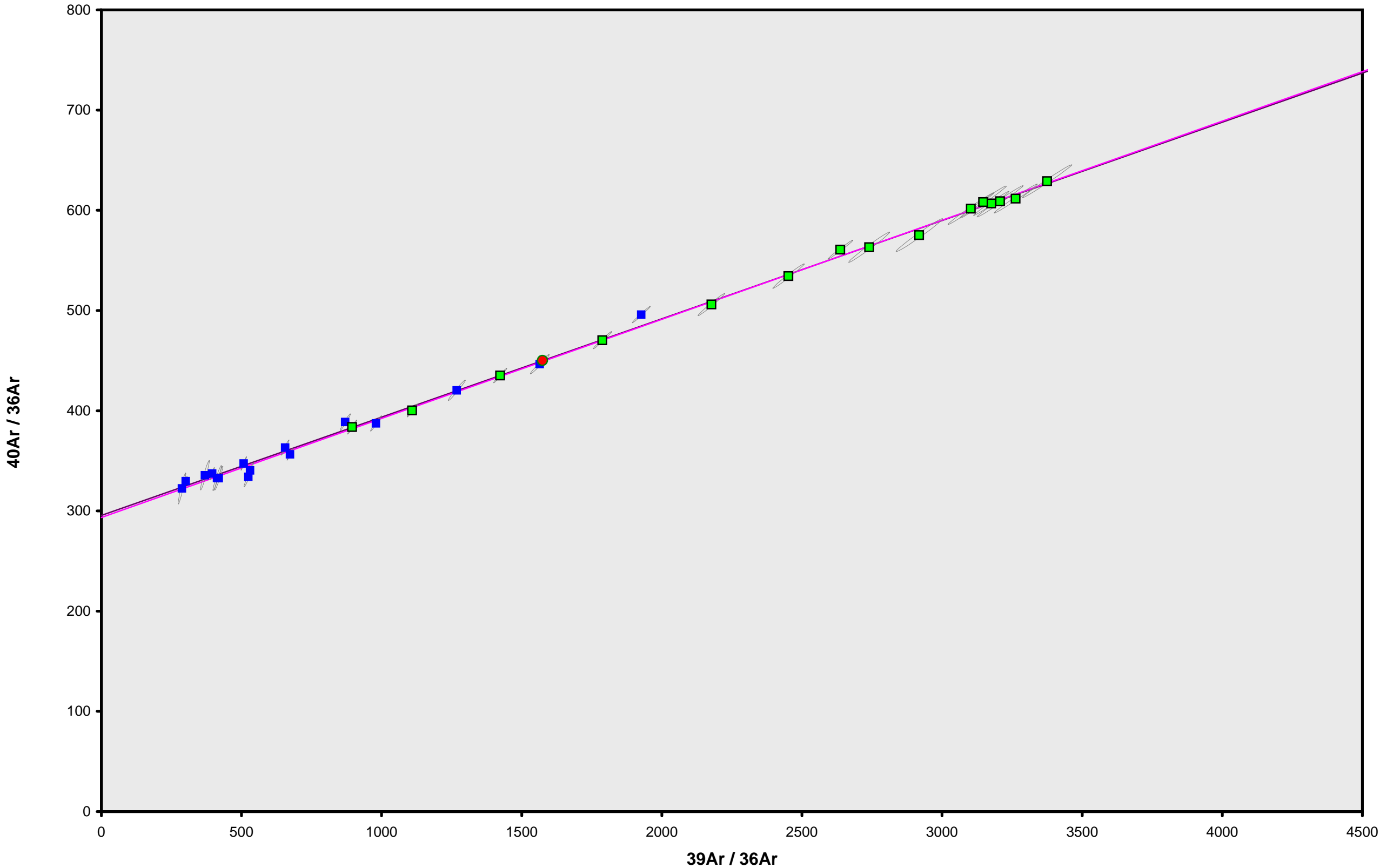
**Dan Miggins**

**IRR = 14-OSU-07 (7B20-14)**

**$J = 0.00179298 \pm 0.00000210$**



15D10129.AGE >>> 253-14 >>> KERGUELEN | FALLOON (14-PIL-01) PROJECT



Ar-Ages in ka

WEIGHTED PLATEAU

$318.0 \pm 2.5$

TOTAL FUSION

$318.5 \pm 2.5$

NORMAL ISOCHRON

$320.5 \pm 6.7$

INVERSE ISOCHRON

$320.6 \pm 6.7$

MSWD (PROBABILITY)

1.13 (32%)

40AR/36AR INTERCEPT

$293.4 \pm 4.9$

Sample Info

Groundmass

Kerguelen Plateau

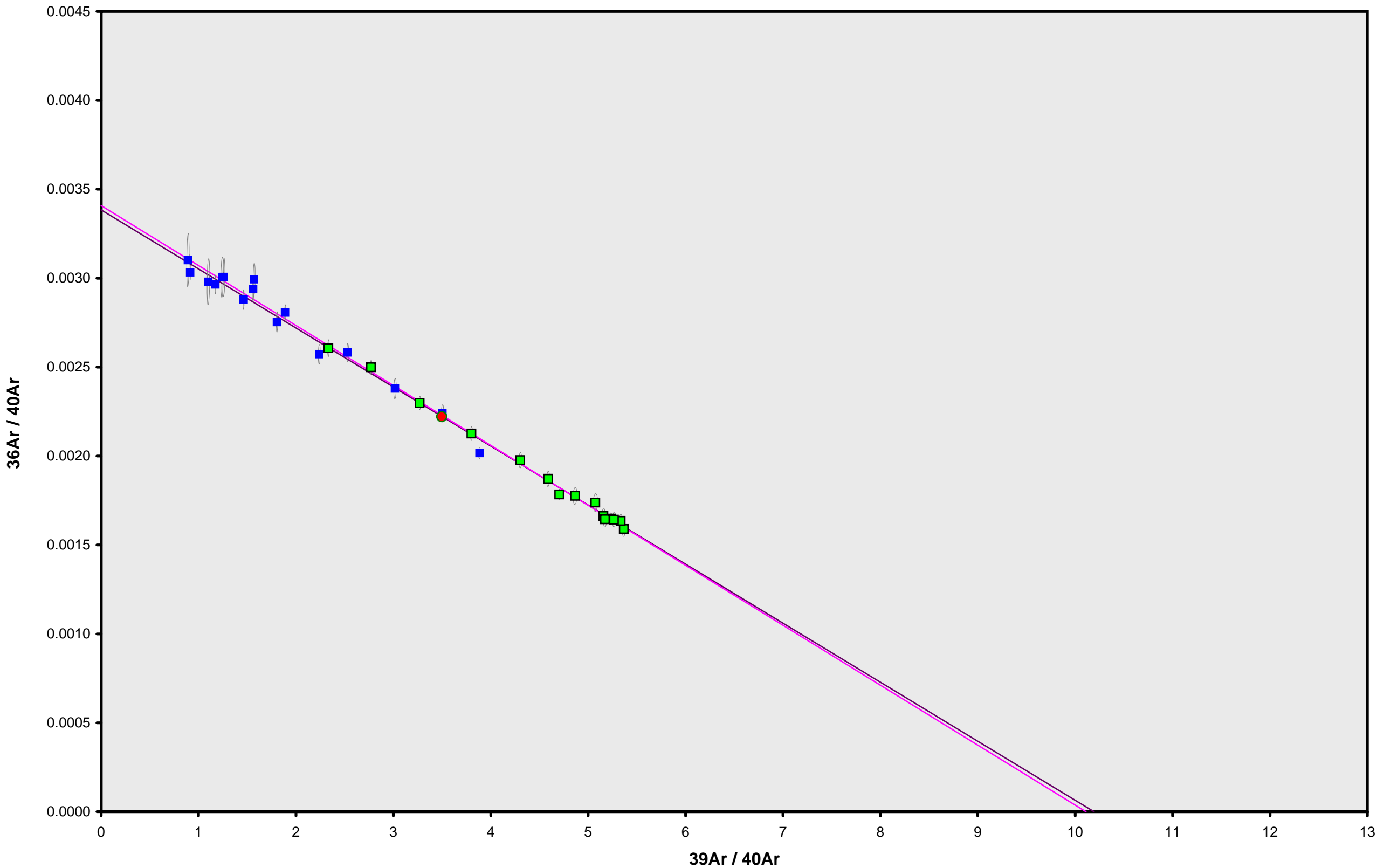
Dan Miggins

IRR = 14-OSU-07 (7B20-14)

J =  $0.00179298 \pm 0.00000210$



15D10129.AGE >>> 253-14 >>> KERGUELEN | FALLOON (14-PIL-01) PROJECT



Ar-Ages in ka

WEIGHTED PLATEAU

$318.0 \pm 2.5$

TOTAL FUSION

$318.5 \pm 2.5$

NORMAL ISOCHRON

$320.5 \pm 6.7$

INVERSE ISOCHRON

$320.6 \pm 6.7$

MSWD (PROBABILITY)

1.14 (32%)

SPREADING FACTOR

30.0%

40AR/36AR INTERCEPT

$293.4 \pm 4.9$

Sample Info

Groundmass

Kerguelen Plateau

Dan Miggins

IRR = 14-OSU-07 (7B20-14)

J =  $0.00179298 \pm 0.00000210$



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
15D10088	2.0 %	0.1728543	96.9540	1.9140395	181.7484	99.5507	1.76 ± 0.02	66.01	4.05	0.81 ± 0.01
15D10090	2.2 %	✓ 0.1195428	102.1784	1.3677530	187.1453	98.2901	1.69 ± 0.01	73.46	4.17	0.79 ± 0.01
15D10091	2.4 %	✓ 0.0764198	85.1347	0.7904124	151.0948	79.0540	1.68 ± 0.01	77.66	3.37	0.76 ± 0.01
15D10092	2.6 %	✓ 0.0764445	112.4153	0.7182838	198.0226	103.7342	1.69 ± 0.01	81.99	4.42	0.76 ± 0.01
15D10094	2.8 %	✓ 0.0624908	115.7113	0.5739129	198.5068	103.9542	1.69 ± 0.01	84.78	4.43	0.74 ± 0.01
15D10095	3.0 %	✓ 0.0449630	96.4702	0.3648076	166.4190	87.3808	1.69 ± 0.01	86.66	3.71	0.74 ± 0.01
15D10096	3.3 %	✓ 0.0536430	135.9514	0.4021361	236.8147	123.6205	1.68 ± 0.01	88.48	5.28	0.75 ± 0.01
15D10097	3.6 %	✓ 0.0390790	112.9255	0.1900243	199.7259	104.1776	1.68 ± 0.01	89.86	4.46	0.76 ± 0.01
15D10099	3.9 %	✓ 0.0398890	124.4899	0.2508257	228.5862	118.9337	1.68 ± 0.01	90.82	5.10	0.79 ± 0.01
15D10100	4.3 %	✓ 0.0403969	134.2231	0.2404202	259.0330	135.2565	1.68 ± 0.01	91.73	5.78	0.83 ± 0.01
15D10101	4.6 %	✓ 0.0402607	129.3767	0.2321280	263.3558	136.9044	1.67 ± 0.01	91.84	5.87	0.88 ± 0.01
15D10102	4.9 %	✓ 0.0395318	128.0949	0.1852347	270.9157	140.7385	1.67 ± 0.01	92.17	6.04	0.91 ± 0.01
15D10104	5.2 %	✓ 0.0455231	138.8732	0.2190651	300.6074	155.7881	1.67 ± 0.01	91.89	6.71	0.93 ± 0.01
15D10105	5.5 %	✓ 0.0278995	83.5109	0.1225381	182.7708	94.6638	1.67 ± 0.01	91.82	4.08	0.94 ± 0.01
15D10106	5.8 %	✓ 0.0266064	78.5047	0.1505043	172.3371	89.4757	1.67 ± 0.01	91.76	3.84	0.94 ± 0.01
15D10108	6.1 %	✓ 0.0334998	96.7647	0.1593002	207.2724	107.5623	1.67 ± 0.01	91.41	4.62	0.92 ± 0.01
15D10109	6.5 %	✓ 0.0228921	61.6931	0.0944651	131.6949	68.4303	1.67 ± 0.01	90.84	2.94	0.92 ± 0.01
15D10110	7.0 %	0.0367368	90.1765	0.1306995	184.5080	94.9749	1.66 ± 0.01	89.58	4.12	0.88 ± 0.01
15D10112	7.6 %	0.0385276	79.3321	0.1093574	159.6806	81.3630	1.64 ± 0.01	87.57	3.56	0.87 ± 0.01
15D10113	8.4 %	0.0262391	50.9462	0.1000374	98.3470	50.1386	1.64 ± 0.01	86.46	2.19	0.83 ± 0.01
15D10114	9.4 %	0.0515962	94.3092	0.2122695	148.9204	73.8345	1.60 ± 0.01	82.74	3.32	0.68 ± 0.01
15D10116	10.5 %	0.0368497	61.0439	0.1619464	91.7247	45.0068	1.58 ± 0.02	80.39	2.05	0.65 ± 0.01
15D10117	11.7 %	0.0319920	50.9337	0.1452180	72.5329	35.5282	1.58 ± 0.02	78.86	1.62	0.61 ± 0.01
15D10118	13.1 %	0.0344416	58.5101	0.0771558	63.3389	29.5286	1.50 ± 0.02	74.25	1.41	0.47 ± 0.01
15D10120	14.7 %	0.0257829	54.2710	0.1147154	34.9981	14.6784	1.35 ± 0.04	65.73	0.78	0.28 ± 0.00
15D10121	16.5 %	0.0227344	62.9205	0.0761165	26.3831	9.9483	1.21 ± 0.05	59.60	0.59	0.18 ± 0.00
15D10122	18.5 %	0.0237086	94.9295	0.1028219	23.4035	7.9127	1.09 ± 0.06	52.96	0.52	0.11 ± 0.00
15D10124	19.8 %	0.0188555	86.4819	0.0481333	15.4597	5.2910	1.10 ± 0.09	48.64	0.34	0.08 ± 0.00
15D10125	21.7 %	0.0170682	99.2521	0.0799614	12.6120	4.1643	1.06 ± 0.13	45.16	0.28	0.05 ± 0.00
15D10126	22.8 %	0.0157019	69.3740	0.0576873	9.0163	2.8995	1.04 ± 0.16	38.41	0.20	0.06 ± 0.00
15D10128	24.3 %	0.0133585	48.0498	0.0058234	6.1122	1.8821	0.99 ± 0.22	32.25	0.14	0.05 ± 0.00
Σ		1.3555293	2833.8025	9.3977943	4483.0883	2304.6663				

Information on Analysis	Results	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD	39Ar(k) (%,n)	K/Ca ± 2σ
Sample = 1180044-1A	Age Plateau Error Mean	0.52083 ± 0.00110 ± 0.21%	1.68 ± 0.01 ± 0.31%	2.81 0%	74.82 16	0.82 ± 0.04
Material = Groundmass						
Location = Kerguelen Plateau						
Analyst = Dan Miggins	Total Fusion Age	0.51408 ± 0.00067 ± 0.13%	1.66 ± 0.00 ± 0.27%	1.73 1.6750	2σ Confidence Limit Error Magnification	
Project = KERGUELEN   FALLOON (14-I						
Mass Discrimination Law = LIN						
Irradiation = 14-OSU-07 (7B22-14)						
J = 0.00178150 ± 0.00000207						
FCT-NM = 28.201 ± 0.023 Ma						



Normal Isochron			39(k)/36(a) ± 2σ	40(a+r)/36(a) ± 2σ	r.i.
15D10088	2.0 %		1051.45 ± 17.09	871.42 ± 14.14	0.9937
15D10090	2.2 %	✓	1565.51 ± 30.02	1117.72 ± 21.43	0.9951
15D10091	2.4 %	✓	1977.17 ± 49.85	1329.97 ± 33.55	0.9962
15D10092	2.6 %	✓	2590.41 ± 66.37	1652.49 ± 42.33	0.9972
15D10094	2.8 %	✓	3176.57 ± 85.05	1959.01 ± 52.45	0.9973
15D10095	3.0 %	✓	3701.24 ± 132.59	2238.89 ± 80.23	0.9982
15D10096	3.3 %	✓	4414.64 ± 145.54	2600.00 ± 85.70	0.9985
15D10097	3.6 %	✓	5110.83 ± 224.21	2961.32 ± 129.92	0.9990
15D10099	3.9 %	✓	5730.56 ± 253.50	3277.12 ± 144.96	0.9991
15D10100	4.3 %	✓	6412.20 ± 268.05	3643.69 ± 152.30	0.9991
15D10101	4.6 %	✓	6541.27 ± 264.34	3695.95 ± 149.34	0.9990
15D10102	4.9 %	✓	6853.11 ± 293.89	3855.63 ± 165.33	0.9992
15D10104	5.2 %	✓	6603.40 ± 270.30	3717.67 ± 152.15	0.9992
15D10105	5.5 %	✓	6551.05 ± 379.85	3688.53 ± 213.90	0.9993
15D10106	5.8 %	✓	6477.29 ± 362.42	3658.44 ± 204.73	0.9992
15D10108	6.1 %	✓	6187.28 ± 309.97	3506.33 ± 175.67	0.9992
15D10109	6.5 %	✓	5752.85 ± 381.86	3284.75 ± 218.11	0.9992
15D10110	7.0 %		5022.43 ± 234.63	2880.78 ± 134.60	0.9990
15D10112	7.6 %		4144.58 ± 173.17	2407.31 ± 100.62	0.9985
15D10113	8.4 %		3748.11 ± 202.40	2206.34 ± 119.26	0.9981
15D10114	9.4 %		2886.27 ± 95.33	1726.51 ± 57.07	0.9975
15D10116	10.5 %		2489.16 ± 103.12	1516.86 ± 62.95	0.9968
15D10117	11.7 %		2267.22 ± 108.94	1406.03 ± 67.72	0.9964
15D10118	13.1 %		1839.02 ± 79.81	1152.85 ± 50.22	0.9945
15D10120	14.7 %		1357.42 ± 75.55	864.81 ± 48.50	0.9903
15D10121	16.5 %		1160.49 ± 68.61	733.09 ± 43.86	0.9853
15D10122	18.5 %		987.13 ± 60.82	629.25 ± 39.31	0.9831
15D10124	19.8 %		819.91 ± 61.33	576.11 ± 43.85	0.9787
15D10125	21.7 %		738.92 ± 67.80	539.48 ± 50.34	0.9796
15D10126	22.8 %		574.22 ± 51.35	480.16 ± 43.96	0.9677
15D10128	24.3 %		457.55 ± 44.24	436.39 ± 43.65	0.9538

Results	40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD
Normal Isochron	311.65 ± 6.95 ± 2.23%	0.51727 ± 0.00166 ± 0.32%	1.67 ± 0.01 ± 0.40%	1.25 23%
			Full External Error ± 0.04 Analytical Error ± 0.01	
Statistics	2σ Confidence Limit Error Magnification Number of Data Points	1.76 1.1158 16	Convergence Number of Iterations Calculated Line	0.000005129014 65 Weighted York-2



Inverse Isochron	39(k)/40(a+r) ± 2σ			36(a)/40(a+r) ± 2σ	r.i.
15D10088	2.0 %		1.2065953 ± 0.0022023	0.00114755 ± 0.00001862	0.0451
15D10090	2.2 %	✓	1.4006309 ± 0.0026542	0.00089468 ± 0.00001715	0.0457
15D10091	2.4 %	✓	1.4866261 ± 0.0032610	0.00075190 ± 0.00001897	0.0501
15D10092	2.6 %	✓	1.5675826 ± 0.0030177	0.00060515 ± 0.00001550	0.0366
15D10094	2.8 %	✓	1.6215188 ± 0.0031686	0.00051046 ± 0.00001367	0.0366
15D10095	3.0 %	✓	1.6531568 ± 0.0035983	0.00044665 ± 0.00001601	0.0359
15D10096	3.3 %	✓	1.6979373 ± 0.0031026	0.00038462 ± 0.00001268	0.0250
15D10097	3.6 %	✓	1.7258599 ± 0.0034538	0.00033769 ± 0.00001482	0.0240
15D10099	3.9 %	✓	1.7486577 ± 0.0033196	0.00030515 ± 0.00001350	0.0209
15D10100	4.3 %	✓	1.7598093 ± 0.0031138	0.00027445 ± 0.00001147	0.0177
15D10101	4.6 %	✓	1.7698475 ± 0.0031517	0.00027057 ± 0.00001093	0.0184
15D10102	4.9 %	✓	1.7774273 ± 0.0031344	0.00025936 ± 0.00001112	0.0173
15D10104	5.2 %	✓	1.7762179 ± 0.0029969	0.00026899 ± 0.00001101	0.0155
15D10105	5.5 %	✓	1.7760589 ± 0.0038462	0.00027111 ± 0.00001572	0.0218
15D10106	5.8 %	✓	1.7705040 ± 0.0039327	0.00027334 ± 0.00001530	0.0238
15D10108	6.1 %	✓	1.7645992 ± 0.0035187	0.00028520 ± 0.00001429	0.0207
15D10109	6.5 %	✓	1.7513790 ± 0.0046820	0.00030444 ± 0.00002021	0.0283
15D10110	7.0 %		1.7434280 ± 0.0036971	0.00034713 ± 0.00001622	0.0257
15D10112	7.6 %		1.7216631 ± 0.0039671	0.00041540 ± 0.00001736	0.0345
15D10113	8.4 %		1.6987943 ± 0.0055923	0.00045324 ± 0.00002450	0.0467
15D10114	9.4 %		1.6717385 ± 0.0039418	0.00057920 ± 0.00001914	0.0453
15D10116	10.5 %		1.6409913 ± 0.0054430	0.00065925 ± 0.00002736	0.0622
15D10117	11.7 %		1.6124938 ± 0.0066157	0.00071122 ± 0.00003426	0.0708
15D10118	13.1 %		1.5951916 ± 0.0072676	0.00086741 ± 0.00003779	0.0886
15D10120	14.7 %		1.5696203 ± 0.0122050	0.00115633 ± 0.00006485	0.1240
15D10121	16.5 %		1.5830249 ± 0.0161880	0.00136409 ± 0.00008162	0.1552
15D10122	18.5 %		1.5687482 ± 0.0179596	0.00158920 ± 0.00009929	0.1669
15D10124	19.8 %		1.4231728 ± 0.0222519	0.00173578 ± 0.00013212	0.1863
15D10125	21.7 %		1.3696875 ± 0.0256791	0.00185363 ± 0.00017297	0.1827
15D10126	22.8 %		1.1958921 ± 0.0276065	0.00208264 ± 0.00019069	0.2175
15D10128	24.3 %		1.0484802 ± 0.0315233	0.00229151 ± 0.00022921	0.2591

Results	40(a)/36(a) ± 2σ		40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD
Inverse Isochron	310.37 ± 6.99 ± 2.25%		0.51768 ± 0.00166 ± 0.32%	1.67 ± 0.01 ± 0.40%	1.25 23%
			Full External Error ± 0.04 Analytical Error ± 0.01		
Statistics	2σ Confidence Limit	1.76	Convergence	0.0001901700	
	Error Magnification	1.1181	Number of Iterations	3	
	Number of Data Points	16	Calculated Line	Weighted York-2	
	Spreading Factor	19.5%			



OSU Argon Geochronology Lab																
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
15D10088	2.0 %	0.1987317	0.702	96.9540	0.418	4.015991	1.238	181.8137	0.071	150.8127	0.058	0.54774 ± 0.00471	1.76 ± 0.02	66.01	4.05	0.81 ± 0.01
15D10090	2.2 %	✓ 0.1467191	0.776	102.1784	0.408	3.521229	1.454	187.2140	0.069	133.8040	0.064	0.52521 ± 0.00380	1.69 ± 0.01	73.46	4.17	0.79 ± 0.01
15D10091	2.4 %	✓ 0.0990116	0.966	85.1347	0.449	2.525338	1.917	151.1521	0.071	101.7887	0.083	0.52321 ± 0.00400	1.68 ± 0.01	77.66	3.37	0.76 ± 0.01
15D10092	2.6 %	✓ 0.1062278	0.914	112.4153	0.400	2.987631	1.686	198.0983	0.069	126.5236	0.067	0.52385 ± 0.00313	1.69 ± 0.01	81.99	4.42	0.76 ± 0.01
15D10094	2.8 %	✓ 0.0931231	0.888	115.7113	0.397	2.846208	1.732	198.5846	0.069	122.6208	0.069	0.52368 ± 0.00273	1.69 ± 0.01	84.78	4.43	0.74 ± 0.01
15D10095	3.0 %	✓ 0.0704848	1.131	96.4702	0.426	2.268401	2.277	166.4839	0.070	100.8355	0.084	0.52507 ± 0.00312	1.69 ± 0.01	86.66	3.71	0.74 ± 0.01
15D10096	3.3 %	✓ 0.0895934	0.974	135.9514	0.376	3.109003	1.634	236.9062	0.068	139.7112	0.061	0.52201 ± 0.00243	1.68 ± 0.01	88.48	5.28	0.75 ± 0.01
15D10097	3.6 %	✓ 0.0689193	1.231	112.9255	0.399	2.471779	2.054	199.8019	0.069	115.9272	0.072	0.52160 ± 0.00277	1.68 ± 0.01	89.86	4.46	0.76 ± 0.01
15D10099	3.9 %	✓ 0.0727912	1.199	124.4899	0.386	2.861322	1.742	228.6699	0.068	130.9518	0.066	0.52030 ± 0.00250	1.68 ± 0.01	90.82	5.10	0.79 ± 0.01
15D10100	4.3 %	✓ 0.0758672	1.098	134.2231	0.376	3.197632	1.562	259.1233	0.068	147.4554	0.057	0.52216 ± 0.00215	1.68 ± 0.01	91.73	5.78	0.83 ± 0.01
15D10101	4.6 %	✓ 0.0744503	1.078	129.3767	0.380	3.238440	1.521	263.4429	0.068	149.0674	0.057	0.51985 ± 0.00206	1.67 ± 0.01	91.84	5.87	0.88 ± 0.01
15D10102	4.9 %	✓ 0.0733761	1.141	128.0949	0.380	3.277424	1.565	271.0019	0.067	152.6937	0.057	0.51949 ± 0.00208	1.67 ± 0.01	92.17	6.04	0.91 ± 0.01
15D10104	5.2 %	✓ 0.0822179	1.120	138.8732	0.376	3.650416	1.367	300.7009	0.067	169.5438	0.052	0.51824 ± 0.00204	1.67 ± 0.01	91.89	6.71	0.93 ± 0.01
15D10105	5.5 %	✓ 0.0499644	1.606	83.5109	0.443	2.208845	2.231	182.8270	0.070	103.0927	0.083	0.51794 ± 0.00287	1.67 ± 0.01	91.82	4.08	0.94 ± 0.01
15D10106	5.8 %	✓ 0.0473538	1.559	78.5047	0.457	2.117764	2.424	172.3899	0.070	97.5119	0.086	0.51919 ± 0.00283	1.67 ± 0.01	91.76	3.84	0.94 ± 0.01
15D10108	6.1 %	✓ 0.0590691	1.408	96.7647	0.425	2.525666	1.953	207.3375	0.069	117.6708	0.072	0.51894 ± 0.00263	1.67 ± 0.01	91.41	4.62	0.92 ± 0.01
15D10109	6.5 %	✓ 0.0391930	1.926	61.6931	0.508	1.598289	3.148	131.7364	0.073	75.3280	0.112	0.51961 ± 0.00372	1.67 ± 0.01	90.84	2.94	0.92 ± 0.01
15D10110	7.0 %	0.0605626	1.406	90.1765	0.434	2.238520	2.217	184.5687	0.070	106.0170	0.080	0.51475 ± 0.00298	1.66 ± 0.01	89.58	4.12	0.88 ± 0.01
15D10112	7.6 %	0.0594874	1.342	79.3321	0.467	1.934826	2.596	159.7340	0.070	92.9092	0.091	0.50954 ± 0.00324	1.64 ± 0.01	87.57	3.56	0.87 ± 0.01
15D10113	8.4 %	0.0397036	1.772	50.9462	0.597	1.224839	4.097	98.3813	0.080	57.9916	0.144	0.50981 ± 0.00465	1.64 ± 0.01	86.46	2.19	0.83 ± 0.01
15D10114	9.4 %	0.0765251	1.104	94.3092	0.428	1.917937	2.616	148.9838	0.071	89.2315	0.094	0.49580 ± 0.00363	1.60 ± 0.01	82.74	3.32	0.68 ± 0.01
15D10116	10.5 %	0.0529891	1.430	61.0439	0.546	1.213509	4.074	91.7658	0.078	55.9886	0.146	0.49067 ± 0.00528	1.58 ± 0.02	80.39	2.05	0.65 ± 0.01
15D10117	11.7 %	0.0454599	1.680	50.9337	0.620	0.977330	5.075	72.5672	0.084	45.0551	0.187	0.48982 ± 0.00673	1.58 ± 0.02	78.86	1.62	0.61 ± 0.01
15D10118	13.1 %	0.0498997	1.487	58.5101	0.550	0.805203	6.040	63.3783	0.089	39.7701	0.209	0.46620 ± 0.00749	1.50 ± 0.02	74.25	1.41	0.47 ± 0.01
15D10120	14.7 %	0.0401274	1.774	54.2710	0.579	0.518567	9.736	35.0347	0.126	22.3325	0.367	0.41940 ± 0.01302	1.35 ± 0.04	65.73	0.78	0.28 ± 0.00
15D10121	16.5 %	0.0393566	1.691	62.9205	0.515	0.381480	13.026	26.4254	0.155	16.6929	0.487	0.37707 ± 0.01629	1.21 ± 0.05	59.60	0.59	0.18 ± 0.00
15D10122	18.5 %	0.0487852	1.478	94.9295	0.433	0.374904	13.698	23.4674	0.170	14.9422	0.545	0.33810 ± 0.01972	1.09 ± 0.06	52.96	0.52	0.11 ± 0.00
15D10124	19.8 %	0.0416938	1.671	86.4819	0.438	0.228791	22.448	15.5179	0.238	10.8785	0.743	0.34225 ± 0.02891	1.10 ± 0.09	48.64	0.34	0.08 ± 0.00
15D10125	21.7 %	0.0432825	1.787	99.2521	0.427	0.228056	22.342	12.6788	0.281	9.2207	0.893	0.33019 ± 0.03893	1.06 ± 0.13	45.16	0.28	0.05 ± 0.00
15D10126	22.8 %	0.0340251	2.037	69.3740	0.485	0.164192	30.324	9.0630	0.425	7.5485	1.071	0.32159 ± 0.04927	1.04 ± 0.16	38.41	0.20	0.06 ± 0.00
15D10128	24.3 %	0.0260445	2.444	48.0498	0.624	0.078545	63.796	6.1445	0.555	5.8357	1.394	0.30793 ± 0.06759	0.99 ± 0.22	32.25	0.14	0.05 ± 0.00
Σ		2.1050365	0.221	2833.8025	0.079	60.708077	0.460	4484.9954	0.015	2709.7531	0.017					

Information on Analysis and Constants Used in Calculations

Sample = 1180044-1A  
Material = Groundmass  
Location = Kerguelen Plateau  
Analyst = Dan Miggins  
Project = KERGUELEN | FALLOON (14-PIL-01)  
Mass Discrimination Law = LIN  
Irradiation = 14-OSU-07 (7B22-14)  
J = 0.00178150 ± 0.00000207  
FCT-NM = 28.201 ± 0.023 Ma  
IGSN = Undefined  
Preferred Age = Undefined  
Classification = Undefined  
Experiment Type = Incremental Heating  
Extraction Method = Undefined  
Heating = 77 sec  
Isolation = 6.00 min  
Instrument = ARGUS-VI-D  
Lithology = Undefined  
Lat-Lon = Undefined - Undefined  
Collector Calibrations = 40Ar 36Ar

Age Equations = Min et al. (2000)  
Negative Intensities = Allowed  
Decay Constant 40K = 5.530 ± 0.048 E-10 1/a  
Decay Constant 39Ar = 2.940 ± 0.016 E-07 1/h  
Decay Constant 37Ar = 8.230 ± 0.012 E-04 1/h  
Decay Constant 36Cl = 2.257 ± 0.015 E-06 1/a  
Decay Constant 40K(EC,β<sup>+</sup>) = 0.580 ± 0.009 E-10 1/a  
Decay Constant 40K(β<sup>-</sup>) = 4.950 ± 0.043 E-10 1/a  
Atmospheric Ratio 40/36(a) = 295.50  
Atmospheric Ratio 38/36(a) = 0.1869  
Production Ratio 39/37(ca) = 0.000673  
Production Ratio 38/37(ca) = 0.000014  
Production Ratio 36/37(ca) = 0.000264  
Production Ratio 40/39(k) = 0.001010  
Production Ratio 38/39(k) = 0.011380  
Production Ratio 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

Results

	40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD	39Ar(k) (% ,n)	K/Ca ± 2σ
Age Plateau Error Mean		0.52083 ± 0.00110 ± 0.21%	1.68 ± 0.01 ± 0.31%	2.81 0%	74.82 16	0.82 ± 0.04
			Full External Error ± 0.04 Analytical Error ± 0.00	1.73 1.6750	2σ Confidence Limit Error Magnification	
Total Fusion Age		0.51408 ± 0.00067 ± 0.13%	1.66 ± 0.00 ± 0.27%		31	0.68 ± 0.00
			Full External Error ± 0.04 Analytical Error ± 0.00			
Normal Isochron	311.65 ± 6.95 ± 2.23%	0.51727 ± 0.00166 ± 0.32%	1.67 ± 0.01 ± 0.40%	1.25 23%	74.82 16	
			Full External Error ± 0.04 Analytical Error ± 0.01	1.76 1.1158	2σ Confidence Limit Error Magnification	
				65 0.0000051290	Number of Iterations Convergence	
Inverse Isochron	310.37 ± 6.99 ± 2.25%	0.51768 ± 0.00166 ± 0.32%	1.67 ± 0.01 ± 0.40%	1.25 23%	74.82 16	
			Full External Error ± 0.04	1.76	2σ Confidence Limit	



OSU Argon Geochronology Lab																																																
Degassing Patterns	36Ar(a) [fA]			36Ar(c) [fA]			36Ar(ca) [fA]			36Ar(cl) [fA]			37Ar(ca) [fA]			38Ar(a) [fA]			38Ar(c) [fA]			38Ar(k) [fA]			38Ar(ca) [fA]			38Ar(cl) [fA]			39Ar(k) [fA]			39Ar(ca) [fA]			40Ar(r) [fA]			40Ar(a) [fA]			40Ar(c) [fA]			40Ar(k) [fA]		
			%1σ			%1σ			%1σ			%1σ			%1σ			%1σ			%1σ			%1σ			%1σ			%1σ			%1σ			%1σ			%1σ			%1σ						
15D10088	2.0 %		0.1728543	0.81	0.00000000	0.00	0.0255958	0.42	0.0002815	2.76	96.9540	0.42	0.0323065	0.81	0.00000000	0.00	2.068297	0.07	0.0013477	0.42	1.9140395	2.91	181.7484	0.07	0.0652500	0.42	99.5507	0.42	51.07846	0.81	0.00000000	0.00	0.1835659	0.07														
15D10090	2.2 %	✓	0.1195428	0.96	0.00000000	0.00	0.0269751	0.41	0.0002012	3.86	102.1784	0.41	0.0223426	0.96	0.00000000	0.00	2.129713	0.07	0.0014203	0.41	1.3677530	3.96	187.1453	0.07	0.0687661	0.41	98.2901	0.35	35.32491	0.96	0.00000000	0.00	0.1890167	0.07														
15D10091	2.4 %	✓	0.0764198	1.26	0.00000000	0.00	0.0224756	0.45	0.0001163	6.20	85.1347	0.45	0.0142829	1.26	0.00000000	0.00	1.719459	0.07	0.0011834	0.45	0.7904124	6.26	151.0948	0.07	0.0572957	0.45	79.0540	0.38	22.58205	1.26	0.00000000	0.00	0.1526058	0.07														
15D10092	2.6 %	✓	0.0764445	1.28	0.00000000	0.00	0.0296776	0.40	0.0001057	7.08	112.4153	0.40	0.0142875	1.28	0.00000000	0.00	2.253498	0.07	0.0015626	0.40	0.7182838	7.14	198.0226	0.07	0.0756555	0.40	103.7342	0.29	22.58935	1.28	0.00000000	0.00	0.2000029	0.07														
15D10094	2.8 %	✓	0.0624908	1.34	0.00000000	0.00	0.0305478	0.40	0.0000845	8.65	115.7113	0.40	0.0116795	1.34	0.00000000	0.00	2.259007	0.07	0.0016084	0.40	0.5739129	8.69	198.5068	0.07	0.0778737	0.40	103.9542	0.25	18.46604	1.34	0.00000000	0.00	0.2004918	0.07														
15D10095	3.0 %	✓	0.0449630	1.79	0.00000000	0.00	0.0254681	0.43	0.0000537	14.19	96.4702	0.43	0.0084036	1.79	0.00000000	0.00	1.893848	0.07	0.0013409	0.43	0.3648076	14.22	166.4190	0.07	0.0649244	0.43	87.3808	0.29	13.28656	1.79	0.00000000	0.00	0.1680832	0.07														
15D10096	3.3 %	✓	0.0536430	1.65	0.00000000	0.00	0.0358912	0.38	0.0000592	12.68	135.9514	0.38	0.0100259	1.65	0.00000000	0.00	2.694951	0.07	0.0018897	0.38	0.4021361	12.71	236.8147	0.07	0.0914953	0.38	123.6205	0.22	15.85151	1.65	0.00000000	0.00	0.2391828	0.07														
15D10097	3.6 %	✓	0.0390790	2.19	0.00000000	0.00	0.0298123	0.40	0.0000280	26.75	112.9255	0.40	0.0073039	2.19	0.00000000	0.00	2.272881	0.07	0.0015697	0.40	0.1900243	26.77	199.7259	0.07	0.0759989	0.40	104.1776	0.26	11.54784	2.19	0.00000000	0.00	0.2017232	0.07														
15D10099	3.9 %	✓	0.0398890	2.21	0.00000000	0.00	0.0328653	0.39	0.0000369	19.90	124.4899	0.39	0.0074552	2.21	0.00000000	0.00	2.601310	0.07	0.0017304	0.39	0.2508257	19.92	228.5862	0.07	0.0837817	0.39	118.9337	0.23	11.78719	2.21	0.00000000	0.00	0.2308720	0.07														
15D10100	4.3 %	✓	0.0403969	2.09	0.00000000	0.00	0.0354349	0.38	0.0000354	20.81	134.2231	0.38	0.0075502	2.09	0.00000000	0.00	2.947796	0.07	0.0018657	0.38	0.2404202	20.83	259.0330	0.07	0.0903321	0.38	135.2565	0.19	11.93729	2.09	0.00000000	0.00	0.2616233	0.07														
15D10101	4.6 %	✓	0.0402607	2.02	0.00000000	0.00	0.0341555	0.38	0.0000342	21.25	129.3767	0.38	0.0075247	2.02	0.00000000	0.00	2.996989	0.07	0.0017983	0.38	0.2321280	21.27	263.3558	0.07	0.0870706	0.38	136.9044	0.19	11.89702	2.02	0.00000000	0.00	0.2659893	0.07														
15D10102	4.9 %	✓	0.0395318	2.14	0.00000000	0.00	0.0338171	0.38	0.0000273	27.73	128.0949	0.38	0.0073885	2.14	0.00000000	0.00	3.083020	0.07	0.0017805	0.38	0.1852347	27.74	270.9157	0.07	0.0862079	0.38	140.7385	0.19	11.68165	2.14	0.00000000	0.00	0.2736248	0.07														
15D10104	5.2 %	✓	0.0455231	2.05	0.00000000	0.00	0.0366625	0.38	0.0000323	22.82	138.8732	0.38	0.0085083	2.05	0.00000000	0.00	3.420912	0.07	0.0019303	0.38	0.2190651	22.84	300.6074	0.07	0.0934617	0.38	155.7881	0.19	13.45209	2.05	0.00000000	0.00	0.3036135	0.07														
15D10105	5.5 %	✓	0.0278995	2.90	0.00000000	0.00	0.0220469	0.44	0.0000181	40.25	83.5109	0.44	0.0052144	2.90	0.00000000	0.00	2.079932	0.07	0.0011608	0.44	0.1225381	40.26	182.7708	0.07	0.0562028	0.44	94.6638	0.27	8.24429	2.90	0.00000000	0.00	0.1845985	0.07														
15D10106	5.8 %	✓	0.0266064	2.80	0.00000000	0.00	0.0207252	0.46	0.0000222	34.14	78.5047	0.46	0.0049727	2.80	0.00000000	0.00	1.961196	0.07	0.0010912	0.46	0.1505043	34.15	172.3371	0.07	0.0528337	0.46	89.4757	0.26	7.86218	2.80	0.00000000	0.00	0.1740604	0.07														
15D10108	6.1 %	✓	0.0334998	2.50	0.00000000	0.00	0.0255459	0.42	0.0000235	30.99	96.7647	0.42	0.0062611	2.50	0.00000000	0.00	2.358760	0.07	0.0013450	0.42	0.1593002	31.01	207.2724	0.07	0.0651226	0.42	107.5623	0.24	9.89919	2.50	0.00000000	0.00	0.2093451	0.07														
15D10109	6.5 %	✓	0.0228921	3.32	0.00000000	0.00	0.0162870	0.51	0.0000139	53.29	61.6931	0.51	0.0042785	3.32	0.00000000	0.00	1.498688	0.07	0.0008575	0.51	0.0944651	53.29	131.6949	0.07	0.0415195	0.51	68.4303	0.35	6.76462	3.32	0.00000000	0.00	0.1330118	0.07														
15D10110	7.0 %		0.0367368	2.33	0.00000000	0.00	0.0238066	0.43	0.0000193	38.00	90.1765	0.43	0.0068661	2.33	0.00000000	0.00	2.099701	0.07	0.0012535	0.43	0.1306995	38.01	184.5080	0.07	0.0606888	0.43	94.9749	0.28	10.85572	2.33	0.00000000	0.00	0.1863531	0.07														
15D10112	7.6 %		0.0385276	2.09	0.00000000	0.00	0.0209437	0.47	0.0000161	45.95	79.3321	0.47	0.0072008	2.09	0.00000000	0.00	1.817165	0.07	0.0011027	0.47	0.1093574	45.96	159.6806	0.07	0.0533905	0.47	81.3630	0.31	11.38490	2.09	0.00000000	0.00	0.1612774	0.07														
15D10113	8.4 %		0.0262391	2.70	0.00000000	0.00	0.0134498	0.60	0.0000147	50.19	50.9462	0.60	0.0049041	2.70	0.00000000	0.00	1.119189	0.08	0.0007082	0.60	0.1000374	50.19	98.3470	0.08	0.0342868	0.60	50.1386	0.45	7.75365	2.70	0.00000000	0.00	0.0993305	0.08														
15D10114	9.4 %		0.0515962	1.65	0.00000000	0.00	0.0248976	0.43	0.0000313	23.67	94.3092	0.43	0.0096433	1.65	0.00000000	0.00	1.694714	0.07	0.0013109	0.43	0.2122695	23.68	148.9204	0.07	0.0634701	0.43	73.8345	0.36	15.24668	1.65	0.00000000	0.00	0.1504096	0.07														
15D10116	10.5 %		0.0368497	2.07	0.00000000	0.00	0.0161156	0.55	0.0000239	30.55	61.0439	0.55	0.0068872	2.07	0.00000000	0.00	1.043827	0.08	0.00																													



Additional Parameters			40Ar/39Ar	1σ	37Ar/39Ar	1σ	36Ar/39Ar	1σ	Time (days)	37Ar (decay)	39Ar (decay)	40Ar (moles)
15D10088	2.0 %		0.829490	0.000756	0.533260	0.002259	0.001093	0.000008	90.560	5.996748	1.00064008	7.239E-12
15D10090	2.2 %	✓	0.714711	0.000677	0.545784	0.002261	0.000784	0.000006	90.579	5.998969	1.00064021	6.423E-12
15D10091	2.4 %	✓	0.673419	0.000738	0.563239	0.002563	0.000655	0.000006	90.590	6.000204	1.00064029	4.886E-12
15D10092	2.6 %	✓	0.638691	0.000614	0.567472	0.002304	0.000536	0.000005	90.599	6.001356	1.00064036	6.073E-12
15D10094	2.8 %	✓	0.617474	0.000603	0.582680	0.002350	0.000469	0.000004	90.618	6.003579	1.00064049	5.886E-12
15D10095	3.0 %	✓	0.605677	0.000658	0.579457	0.002500	0.000423	0.000005	90.628	6.004732	1.00064056	4.840E-12
15D10096	3.3 %	✓	0.589732	0.000538	0.573862	0.002191	0.000378	0.000004	90.638	6.005885	1.00064063	6.706E-12
15D10097	3.6 %	✓	0.580211	0.000580	0.565187	0.002286	0.000345	0.000004	90.647	6.006956	1.00064069	5.565E-12
15D10099	3.9 %	✓	0.572667	0.000543	0.544408	0.002136	0.000318	0.000004	90.665	6.009099	1.00064082	6.286E-12
15D10100	4.3 %	✓	0.569055	0.000503	0.517989	0.001979	0.000293	0.000003	90.674	6.010253	1.00064089	7.078E-12
15D10101	4.6 %	✓	0.565843	0.000503	0.491100	0.001895	0.000283	0.000003	90.683	6.011243	1.00064094	7.155E-12
15D10102	4.9 %	✓	0.563442	0.000496	0.472672	0.001826	0.000271	0.000003	90.692	6.012315	1.00064101	7.329E-12
15D10104	5.2 %	✓	0.563829	0.000475	0.461832	0.001764	0.000273	0.000003	90.709	6.014377	1.00064113	8.138E-12
15D10105	5.5 %	✓	0.563881	0.000610	0.456776	0.002049	0.000273	0.000004	90.717	6.015367	1.00064119	4.948E-12
15D10106	5.8 %	✓	0.565648	0.000627	0.455391	0.002105	0.000275	0.000004	90.726	6.016439	1.00064125	4.681E-12
15D10108	6.1 %	✓	0.567533	0.000565	0.466701	0.002008	0.000285	0.000004	90.744	6.018503	1.00064138	5.648E-12
15D10109	6.5 %	✓	0.571808	0.000763	0.468307	0.002403	0.000298	0.000006	90.752	6.019494	1.00064143	3.616E-12
15D10110	7.0 %		0.574404	0.000608	0.488580	0.002148	0.000328	0.000005	90.761	6.020567	1.00064150	5.089E-12
15D10112	7.6 %		0.581649	0.000669	0.496651	0.002345	0.000372	0.000005	90.778	6.022632	1.00064162	4.460E-12
15D10113	8.4 %		0.589457	0.000969	0.517844	0.003118	0.000404	0.000007	90.787	6.023623	1.00064168	2.784E-12
15D10114	9.4 %		0.598934	0.000705	0.633016	0.002747	0.000514	0.000006	90.796	6.024698	1.00064174	4.283E-12
15D10116	10.5 %		0.610124	0.001010	0.665214	0.003669	0.000577	0.000008	90.813	6.026764	1.00064187	2.687E-12
15D10117	11.7 %		0.620874	0.001272	0.701883	0.004388	0.000626	0.000011	90.822	6.027756	1.00064192	2.163E-12
15D10118	13.1 %		0.627504	0.001427	0.923188	0.005143	0.000787	0.000012	90.831	6.028831	1.00064199	1.909E-12
15D10120	14.7 %		0.637442	0.002475	1.549066	0.009180	0.001145	0.000020	90.848	6.030899	1.00064211	1.072E-12
15D10121	16.5 %		0.631698	0.003225	2.381058	0.012807	0.001489	0.000025	90.856	6.031891	1.00064217	8.013E-13
15D10122	18.5 %		0.636723	0.003639	4.045170	0.018825	0.002079	0.000031	90.865	6.032967	1.00064223	7.172E-13
15D10124	19.8 %		0.701026	0.005471	5.573041	0.027773	0.002687	0.000045	90.883	6.035119	1.00064236	5.222E-13
15D10125	21.7 %		0.727252	0.006805	7.828181	0.040026	0.003414	0.000062	90.892	6.036195	1.00064242	4.426E-13
15D10126	22.8 %		0.832893	0.009597	7.654623	0.049370	0.003754	0.000078	90.901	6.037272	1.00064249	3.623E-13
15D10128	24.3 %		0.949747	0.014254	7.819937	0.065309	0.004239	0.000106	90.919	6.039342	1.00064261	2.801E-13



Procedure Blanks		36Ar [fA]	1σ	37Ar [fA]	1σ	38Ar [fA]	1σ	39Ar [fA]	1σ	40Ar [fA]	1σ
15D10088	2.0 %	0.0185718	0.0003289	0.0966461	0.0293198	0.0340636	0.0413624	0.0778633	0.0252006	6.1106031	0.0766588
15D10090	2.2 %	0.0177741	0.0003289	0.0435710	0.0293198	0.0340526	0.0413624	0.0686678	0.0252006	5.8001723	0.0766588
15D10091	2.4 %	0.0174652	0.0003289	0.0240667	0.0293198	0.0340299	0.0413624	0.0644805	0.0252006	5.6600866	0.0766588
15D10092	2.6 %	0.0172467	0.0003289	0.0111708	0.0293198	0.0339979	0.0413624	0.0610996	0.0252006	5.5472841	0.0766588
15D10094	2.8 %	0.0169753	0.0003289	0.0020245	0.0293198	0.0339070	0.0413624	0.0558434	0.0252006	5.3713690	0.0766588
15D10095	3.0 %	0.0168933	0.0003289	0.0041224	0.0293198	0.0338447	0.0413624	0.0536880	0.0252006	5.2983140	0.0766588
15D10096	3.3 %	0.0168398	0.0003289	0.0037972	0.0293198	0.0337720	0.0413624	0.0518656	0.0252006	5.2355139	0.0766588
15D10097	3.6 %	0.0168087	0.0003289	0.0018199	0.0293198	0.0336953	0.0413624	0.0504354	0.0252006	5.1850761	0.0766588
15D10099	3.9 %	0.0167772	0.0003289	0.0053166	0.0293198	0.0335149	0.0413624	0.0482021	0.0252006	5.1025462	0.0766588
15D10100	4.3 %	0.0167663	0.0003289	0.0101046	0.0293198	0.0334030	0.0413624	0.0472770	0.0252006	5.0660627	0.0766588
15D10101	4.6 %	0.0167552	0.0003289	0.0143464	0.0293198	0.0332989	0.0413624	0.0466023	0.0252006	5.0381711	0.0766588
15D10102	4.9 %	0.0167381	0.0003289	0.0188244	0.0293198	0.0331775	0.0413624	0.0459676	0.0252006	5.0107608	0.0766588
15D10104	5.2 %	0.0166807	0.0003289	0.0262737	0.0293198	0.0329189	0.0413624	0.0449307	0.0252006	4.9639652	0.0766588
15D10105	5.5 %	0.0166384	0.0003289	0.0289951	0.0293198	0.0327830	0.0413624	0.0444752	0.0252006	4.9433796	0.0766588
15D10106	5.8 %	0.0165801	0.0003289	0.0311437	0.0293198	0.0326272	0.0413624	0.0439823	0.0252006	4.9219345	0.0766588
15D10108	6.1 %	0.0164302	0.0003289	0.0326144	0.0293198	0.0323025	0.0413624	0.0429520	0.0252006	4.8821464	0.0766588
15D10109	6.5 %	0.0163410	0.0003289	0.0319969	0.0293198	0.0321350	0.0413624	0.0423815	0.0252006	4.8634153	0.0766588
15D10110	7.0 %	0.0162329	0.0003289	0.0303544	0.0293198	0.0319448	0.0413624	0.0416822	0.0252006	4.8432972	0.0766588
15D10112	7.6 %	0.0159980	0.0003289	0.0245211	0.0293198	0.0315541	0.0413624	0.0400289	0.0252006	4.8053022	0.0766588
15D10113	8.4 %	0.0158768	0.0003289	0.0206229	0.0293198	0.0313548	0.0413624	0.0390601	0.0252006	4.7876546	0.0766588
15D10114	9.4 %	0.0157434	0.0003289	0.0157606	0.0293198	0.0311303	0.0413624	0.0378611	0.0252006	4.7692957	0.0766588
15D10116	10.5 %	0.0154949	0.0003289	0.0052077	0.0293198	0.0306735	0.0413624	0.0350610	0.0252006	4.7376308	0.0766588
15D10117	11.7 %	0.0153874	0.0003289	0.0000363	0.0293198	0.0304425	0.0413624	0.0334612	0.0252006	4.7249761	0.0766588
15D10118	13.1 %	0.0152863	0.0003289	0.0055141	0.0293198	0.0301836	0.0413624	0.0315242	0.0252006	4.7138795	0.0766588
15D10120	14.7 %	0.0151593	0.0003289	0.0142924	0.0293198	0.0296607	0.0413624	0.0271594	0.0252006	4.7028326	0.0766588
15D10121	16.5 %	0.0151417	0.0003289	0.0170706	0.0293198	0.0293980	0.0413624	0.0247468	0.0252006	4.7037609	0.0766588
15D10122	18.5 %	0.0151638	0.0003289	0.0185263	0.0293198	0.0291048	0.0413624	0.0218885	0.0252006	4.7105000	0.0766588
15D10124	19.8 %	0.0153700	0.0003289	0.0147823	0.0293198	0.0284916	0.0413624	0.0153760	0.0252006	4.7461097	0.0766588
15D10125	21.7 %	0.0155726	0.0003289	0.0085735	0.0293198	0.0281715	0.0413624	0.0117074	0.0252006	4.7773628	0.0766588
15D10126	22.8 %	0.0158549	0.0003289	0.0012587	0.0293198	0.0278426	0.0413624	0.0077557	0.0252006	4.8193181	0.0766588
15D10128	24.3 %	0.0166615	0.0003289	0.0325641	0.0293198	0.0271849	0.0413624	0.0006558	0.0252006	4.9353546	0.0766588



OSU Argon Geochronology Lab																									
Intercept Values	36Ar					37Ar					38Ar					39Ar					40Ar				
	[fA]	1σ	r2			[fA]	1σ	r2			[fA]	1σ	r2			[fA]	1σ	r2			[fA]	1σ	r2		
15D10088	2.0 %	0.2050353	0.0011572	0.2125	EXP 150 of 150	15.9484	0.0301	0.9027	EXP 150 of 150	3.9295261	0.0259132	0.3502	EXP 150 of 150	180.5919	0.0442	0.9987	EXP 150 of 150	157.3677	0.0413	0.9790	EXP 150 of 150				
15D10090	2.2 %	0.1554359	0.0009412	0.0871	EXP 150 of 150	16.7433	0.0297	0.9046	EXP 150 of 150	3.4412310	0.0286670	0.2580	EXP 150 of 150	185.9445	0.0395	0.9990	EXP 150 of 150	139.9984	0.0392	0.9690	EXP 150 of 150				
15D10091	2.4 %	0.1103645	0.0007939	0.0009	EXP 150 of 150	13.9354	0.0321	0.8522	EXP 149 of 150	2.4583567	0.0237063	0.2096	EXP 149 of 150	150.1361	0.0373	0.9986	EXP 150 of 150	107.7487	0.0362	0.8357	EXP 150 of 150				
15D10092	2.6 %	0.1169169	0.0008026	0.0183	EXP 150 of 150	18.3767	0.0319	0.9069	EXP 150 of 150	2.9146506	0.0273056	0.2585	EXP 150 of 150	196.7433	0.0390	0.9991	EXP 150 of 150	132.4437	0.0366	0.9575	EXP 150 of 150				
15D10094	2.8 %	0.1043497	0.0006587	0.0441	EXP 149 of 150	18.8950	0.0324	0.9233	EXP 150 of 150	2.7751630	0.0253758	0.3136	EXP 150 of 150	197.2209	0.0392	0.9991	EXP 150 of 150	128.3534	0.0364	0.9587	EXP 150 of 150				
15D10095	3.0 %	0.0830269	0.0006459	0.2079	EXP 150 of 150	15.7475	0.0323	0.8760	EXP 150 of 150	2.2049574	0.0296517	0.1335	EXP 149 of 150	165.3475	0.0334	0.9991	EXP 150 of 150	106.4309	0.0353	0.8436	EXP 150 of 150				
15D10096	3.3 %	0.1009024	0.0007126	0.1005	EXP 150 of 150	22.1901	0.0308	0.9461	EXP 150 of 150	3.0346640	0.0280786	0.3733	EXP 150 of 150	235.2645	0.0394	0.9994	EXP 150 of 150	145.3583	0.0379	0.9730	EXP 150 of 150				
15D10097	3.6 %	0.0814734	0.0007019	0.1673	EXP 150 of 150	18.4298	0.0314	0.9163	EXP 150 of 150	2.4058313	0.0281161	0.0808	EXP 150 of 150	198.4240	0.0391	0.9991	EXP 150 of 150	121.4538	0.0346	0.9355	EXP 150 of 150				
15D10099	3.9 %	0.0850748	0.0007249	0.1329	EXP 150 of 150	20.3173	0.0314	0.9303	EXP 149 of 150	2.7904720	0.0263507	0.2663	EXP 149 of 150	227.0834	0.0390	0.9993	EXP 150 of 150	136.4402	0.0406	0.9616	EXP 150 of 150				
15D10100	4.3 %	0.0879500	0.0006807	0.3358	EXP 149 of 150	21.9059	0.0302	0.9401	EXP 150 of 150	3.1225054	0.0264800	0.3385	EXP 150 of 150	257.3182	0.0425	0.9994	EXP 150 of 150	152.9560	0.0346	0.9830	EXP 150 of 150				
15D10101	4.6 %	0.0866095	0.0006485	0.3469	EXP 150 of 150	21.1161	0.0301	0.9385	EXP 150 of 150	3.1628855	0.0251714	0.3333	EXP 150 of 150	261.6061	0.0473	0.9993	EXP 150 of 150	154.5448	0.0383	0.9784	EXP 150 of 150				
15D10102	4.9 %	0.0855845	0.0006869	0.2783	EXP 150 of 150	20.9078	0.0299	0.9433	EXP 150 of 150	3.2014825	0.0288766	0.2564	EXP 150 of 150	269.1105	0.0408	0.9995	EXP 150 of 150	158.1544	0.0413	0.9770	EXP 150 of 150				
15D10104	5.2 %	0.0938231	0.0007694	0.1438	EXP 150 of 150	22.6651	0.0321	0.9409	EXP 150 of 150	3.5698662	0.0263032	0.3758	EXP 150 of 150	298.5961	0.0396	0.9996	EXP 150 of 150	175.0073	0.0422	0.9859	EXP 150 of 150				
15D10105	5.5 %	0.0635183	0.0006643	0.3352	EXP 150 of 150	13.6406	0.0290	0.8673	EXP 150 of 150	2.1472410	0.0254397	0.2008	EXP 150 of 150	181.5644	0.0401	0.9989	EXP 150 of 150	108.3398	0.0374	0.8041	EXP 150 of 150				
15D10106	5.8 %	0.0610106	0.0005961	0.3630	EXP 150 of 150	12.8245	0.0291	0.8546	EXP 150 of 150	2.0575039	0.0291360	0.1684	EXP 150 of 150	171.2014	0.0395	0.9988	EXP 150 of 150	102.7212	0.0339	0.7631	EXP 150 of 150				
15D10108	6.1 %	0.0718529	0.0006902	0.2967	EXP 149 of 150	15.7962	0.0320	0.8793	EXP 150 of 150	2.4604086	0.0254577	0.2561	EXP 150 of 150	205.8982	0.0430	0.9990	EXP 150 of 150	122.8997	0.0355	0.9521	EXP 150 of 150				
15D10109	6.5 %	0.0531145	0.0006185	0.2812	EXP 150 of 150	10.0806	0.0262	0.8166	EXP 150 of 150	1.5452993	0.0274039	0.0919	EXP 150 of 150	130.8369	0.0357	0.9983	EXP 150 of 150	80.4133	0.0354	0.1107	EXP 149 of 150				
15D10110	7.0 %	0.0730568	0.0007102	0.1726	EXP 150 of 150	14.7157	0.0308	0.8803	EXP 150 of 150	2.1773671	0.0260803	0.1212	EXP 150 of 150	183.2908	0.0405	0.9989	EXP 150 of 150	111.1726	0.0358	0.9047	EXP 150 of 150				
15D10112	7.6 %	0.0718131	0.0006545	0.0914	EXP 150 of 150	12.9394	0.0321	0.8416	EXP 150 of 150	1.8780265	0.0271965	0.1010	EXP 150 of 150	158.6320	0.0364	0.9988	EXP 150 of 150	97.9882	0.0359	0.7867	EXP 150 of 150				
15D10113	8.4 %	0.0531295	0.0005623	0.2309	EXP 150 of 150	8.3130	0.0295	0.7326	EXP 150 of 150	1.1775019	0.0272050	0.0738	EXP 150 of 150	97.7170	0.0375	0.9967	EXP 150 of 150	62.9501	0.0334	0.8014	EXP 150 of 150				
15D10114	9.4 %	0.0875444	0.0006925	0.0374	EXP 150 of 150	15.3635	0.0315	0.8921	EXP 150 of 150	1.8617817	0.0271274	0.1408	EXP 149 of 150	147.9565	0.0357	0.9987	EXP 150 of 150	94.2638	0.0340	0.7449	EXP 150 of 150				
15D10116	10.5 %	0.0652129	0.0006143	0.0684	EXP 150 of 150	9.9360	0.0324	0.7440	EXP 150 of 150	1.1670018	0.0258452	0.0916	EXP 150 of 150	91.1447	0.0306	0.9974	EXP 150 of 150	60.8912	0.0291	0.8354	EXP 150 of 150				
15D10117	11.7 %	0.0580410	0.0006248	0.1836	EXP 150 of 150	8.2846	0.0325	0.6698	EXP 150 of 150	0.9341354	0.0261448	0.0500	EXP 150 of 150	72.0818	0.0296	0.9962	EXP 150 of 150	49.9128	0.0352	0.8964	EXP 150 of 150				
15D10118	13.1 %	0.0621055	0.0005990	0.1316	EXP 150 of 150	9.5098	0.0305	0.7610	EXP 150 of 150	0.7645130	0.0243378	0.0040	EXP 150 of 150	62.9567	0.0290	0.9951	EXP 150 of 150	44.6012	0.0330	0.9376	EXP 150 of 150				
15D10120	14.7 %	0.0528096	0.0005714	0.0723	EXP 150 of 150	8.8086	0.0306	0.6925	EXP 150 of 150	0.4821404	0.0277806	0.0225	EXP 150 of 150	34.8113	0.0280	0.9850	EXP 150 of 150	27.1012	0.0297	0.9767	EXP 149 of 150				
15D10121	16.5 %	0.0520687	0.0005203	0.0831	EXP 150 of 150	10.2103	0.0286	0.7978	EXP 150 of 150	0.3471043	0.0263454	0.0000	EXP 150 of 150	26.2612	0.0269	0.9753	EXP 150 of 150	21.4459	0.0275	0.9841	EXP 150 of 150				
15D10122	18.5 %	0.0609374	0.0005768	0.0470	EXP 150 of 150	15.4090	0.0333	0.8727	EXP 150 of 150	0.3409076	0.0292867	0.0054	EXP 150 of 150	23.3215	0.0267	0.9692	EXP 150 of 150	19.6967	0.0284	0.9842	EXP 150 of 150				
15D10124	19.8 %	0.0544899	0.0005536	0.0405	EXP 150 of 150	14.0349	0.0293	0.8811	EXP 150 of 150	0.1973139	0.0292999	0.0085	EXP 150 of 150	15.4223	0.0246	0.9306	EXP 150 of 150	15.6566	0.0265	0.9865	EXP 150 of 150				
15D10125	21.7 %	0.0561832	0.0006365	0.0474	EXP 150 of 150	16.1128	0.0340	0.8762	EXP 150 of 150	0.1969086	0.0285985	0.0000	EXP 150 of 150	12.5999	0.0235	0.9181	EXP 150 of 150	14.0252	0.0306	0.9840	EXP 150 of 150				
15D10126	22.8 %	0.0477795	0.0005534	0.0698	EXP 150 of 150	11.2676	0.0282	0.8498	EXP 149 of 150	0.1342072	0.0265288	0.0034	EXP 150 of 150	9.0060	0.0282	0.7837	EXP 150 of 150	12.3901	0.0264	0.9878	EXP 150 of 150				
15D10128	24.3 %	0.0410982	0.0004933	0.1075	EXP 150 of 150	7.8332	0.0295	0.6689	EXP 150 of 150	0.0503349	0.0271083	0.0088	EXP 150 of 150	6.0999	0.0223	0.7318	EXP 150 of 150	10.7883	0.0280	0.9860	EXP 150 of 150				



OSU Argon Geochronology Lab																														
Sample Parameters		Sample	Material	Location	Analyst	Temp	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	Irradiation	X-pos	Y-pos	Z/H-pos
15D10088	2.0 %	1180044-1a	Groundmass	Kerguelen Plateau	Dan Miggins	2	FCT-NM (7B22-14)	28.201	0.082	Kuiper et al (2008)	8.82254	0.116	0.00178150	0.116	303.409	0.117	0.993474796	0.065	1	4.8E-14	1	APR	2015	4	33	1	14-OSU-07	0.00	0.00	30.00
15D10090	2.2 %	1180044-1a	Groundmass	Kerguelen Plateau	Dan Miggins	2.2	FCT-NM (7B22-14)	28.201	0.082	Kuiper et al (2008)	8.82254	0.116	0.00178150	0.116	303.409	0.117	0.993474796	0.065	1	4.8E-14	1	APR	2015	5	0	1	14-OSU-07	0.00	0.00	30.00
15D10091	2.4 %	1180044-1a	Groundmass	Kerguelen Plateau	Dan Miggins	2.4	FCT-NM (7B22-14)	28.201	0.082	Kuiper et al (2008)	8.82254	0.116	0.00178150	0.116	303.409	0.117	0.993474796	0.065	1	4.8E-14	1	APR	2015	5	15	1	14-OSU-07	0.00	0.00	30.00
15D10092	2.6 %	1180044-1a	Groundmass	Kerguelen Plateau	Dan Miggins	2.6	FCT-NM (7B22-14)	28.201	0.082	Kuiper et al (2008)	8.82254	0.116	0.00178150	0.116	303.409	0.117	0.993474796	0.065	1	4.8E-14	1	APR	2015	5	29	1	14-OSU-07	0.00	0.00	30.00
15D10094	2.8 %	1180044-1a	Groundmass	Kerguelen Plateau	Dan Miggins	2.8	FCT-NM (7B22-14)	28.201	0.082	Kuiper et al (2008)	8.82254	0.116	0.00178150	0.116	303.409	0.117	0.993474796	0.065	1	4.8E-14	1	APR	2015	5	56	1	14-OSU-07	0.00	0.00	30.00
15D10095	3.0 %	1180044-1a	Groundmass	Kerguelen Plateau	Dan Miggins	3	FCT-NM (7B22-14)	28.201	0.082	Kuiper et al (2008)	8.82254	0.116	0.00178150	0.116	303.409	0.117	0.993474796	0.065	1	4.8E-14	1	APR	2015	6	10	1	14-OSU-07	0.00	0.00	30.00
15D10096	3.3 %	1180044-1a	Groundmass	Kerguelen Plateau	Dan Miggins	3.3	FCT-NM (7B22-14)	28.201	0.082	Kuiper et al (2008)	8.82254	0.116	0.00178150	0.116	303.409	0.117	0.993474796	0.065	1	4.8E-14	1	APR	2015	6	24	1	14-OSU-07	0.00	0.00	30.00
15D10097	3.6 %	1180044-1a	Groundmass	Kerguelen Plateau	Dan Miggins	3.6	FCT-NM (7B22-14)	28.201	0.082	Kuiper et al (2008)	8.82254	0.116	0.00178150	0.116	303.409	0.117	0.993474796	0.065	1	4.8E-14	1	APR	2015	6	37	1	14-OSU-07	0.00	0.00	30.00
15D10099	3.9 %	1180044-1a	Groundmass	Kerguelen Plateau	Dan Miggins	3.9	FCT-NM (7B22-14)	28.201	0.082	Kuiper et al (2008)	8.82254	0.116	0.00178150	0.116	303.409	0.117	0.993474796	0.065	1	4.8E-14	1	APR	2015	7	3	1	14-OSU-07	0.00	0.00	30.00
15D10100	4.3 %	1180044-1a	Groundmass	Kerguelen Plateau	Dan Miggins	4.3	FCT-NM (7B22-14)	28.201	0.082	Kuiper et al (2008)	8.82254	0.116	0.00178150	0.116	303.409	0.117	0.993474796	0.065	1	4.8E-14	1	APR	2015	7	17	1	14-OSU-07	0.00	0.00	30.00
15D10101	4.6 %	1180044-1a	Groundmass	Kerguelen Plateau	Dan Miggins	4.6	FCT-NM (7B22-14)	28.201	0.082	Kuiper et al (2008)	8.82254	0.116	0.00178150	0.116	303.409	0.117	0.993474796	0.065	1	4.8E-14	1	APR	2015	7	29	1	14-OSU-07	0.00	0.00	30.00
15D10102	4.9 %	1180044-1a	Groundmass	Kerguelen Plateau	Dan Miggins	4.9	FCT-NM (7B22-14)	28.201	0.082	Kuiper et al (2008)	8.82254	0.116	0.00178150	0.116	303.409	0.117	0.993474796	0.065	1	4.8E-14	1	APR	2015	7	42	1	14-OSU-07	0.00	0.00	30.00
15D10104	5.2 %	1180044-1a	Groundmass	Kerguelen Plateau	Dan Miggins	5.2	FCT-NM (7B22-14)	28.201	0.082	Kuiper et al (2008)	8.82254	0.116	0.00178150	0.116	303.409	0.117	0.993474796	0.065	1	4.8E-14	1	APR	2015	8	7	1	14-OSU-07	0.00	0.00	30.00
15D10105	5.5 %	1180044-1a	Groundmass	Kerguelen Plateau	Dan Miggins	5.5	FCT-NM (7B22-14)	28.201	0.082	Kuiper et al (2008)	8.82254	0.116	0.00178150	0.116	303.409	0.117	0.993474796	0.065	1	4.8E-14	1	APR	2015	8	19	1	14-OSU-07	0.00	0.00	30.00
15D10106	5.8 %	1180044-1a	Groundmass	Kerguelen Plateau	Dan Miggins	5.8	FCT-NM (7B22-14)	28.201	0.082	Kuiper et al (2008)	8.82254	0.116	0.00178150	0.116	303.409	0.117	0.993474796	0.065	1	4.8E-14	1	APR	2015	8	32	1	14-OSU-07	0.00	0.00	30.00
15D10108	6.1 %	1180044-1a	Groundmass	Kerguelen Plateau	Dan Miggins	6.1	FCT-NM (7B22-14)	28.201	0.082	Kuiper et al (2008)	8.82254	0.116	0.00178150	0.116	303.409	0.117	0.993474796	0.065	1	4.8E-14	1	APR	2015	8	57	1	14-OSU-07	0.00	0.00	30.00
15D10109	6.5 %	1180044-1a	Groundmass	Kerguelen Plateau	Dan Miggins	6.5	FCT-NM (7B22-14)	28.201	0.082	Kuiper et al (2008)	8.82254	0.116	0.00178150	0.116	303.409	0.117	0.993474796	0.065	1	4.8E-14	1	APR	2015	9	9	1	14-OSU-07	0.00	0.00	30.00
15D10110	7.0 %	1180044-1a	Groundmass	Kerguelen Plateau	Dan Miggins	7	FCT-NM (7B22-14)	28.201	0.082	Kuiper et al (2008)	8.82254	0.116	0.00178150	0.116	303.409	0.117	0.993474796	0.065	1	4.8E-14	1	APR	2015	9	22	1	14-OSU-07	0.00	0.00	30.00
15D10112	7.6 %	1180044-1a	Groundmass	Kerguelen Plateau	Dan Miggins	7.6	FCT-NM (7B22-14)	28.201	0.082	Kuiper et al (2008)	8.82254	0.116	0.00178150	0.116	303.409	0.117	0.993474796	0.065	1	4.8E-14	1	APR	2015	9	47	1	14-OSU-07	0.00	0.00	30.00
15D10113	8.4 %	1180044-1a	Groundmass	Kerguelen Plateau	Dan Miggins	8.4	FCT-NM (7B22-14)	28.201	0.082	Kuiper et al (2008)	8.82254	0.116	0.00178150	0.116	303.409	0.117	0.993474796	0.065	1	4.8E-14	1	APR	2015	9	59	1	14-OSU-07	0.00	0.00	30.00
15D10114	9.4 %	1180044-1a	Groundmass	Kerguelen Plateau	Dan Miggins	9.4	FCT-NM (7B22-14)	28.201	0.082	Kuiper et al (2008)	8.82254	0.116	0.00178150	0.116	303.409	0.117	0.993474796	0.065	1	4.8E-14	1	APR	2015	10	12	1	14-OSU-07	0.00	0.00	30.00
15D10116	10.5 %	1180044-1a	Groundmass	Kerguelen Plateau	Dan Miggins	10.5	FCT-NM (7B22-14)	28.201	0.082	Kuiper et al (2008)	8.82254	0.116	0.00178150	0.116	303.409	0.117	0.993474796	0.065	1	4.8E-14	1	APR	2015	10	37	1	14-OSU-07	0.00	0.00	30.00
15D10117	11.7 %	1180044-1a	Groundmass	Kerguelen Plateau	Dan Miggins	11.7	FCT-NM (7B22-14)	28.201	0.082	Kuiper et al (2008)	8.82254	0.116	0.00178150	0.116	303.409	0.117	0.993474796	0.065	1	4.8E-14	1	APR	2015	10	49	1	14-OSU-07	0.00	0.00	30.00
15D10118	13.1 %	1180044-1a	Groundmass	Kerguelen Plateau	Dan Miggins	13.1	FCT-NM (7B22-14)	28.201	0.082	Kuiper et al (2008)	8.82254	0.116	0.00178150	0.116	303.409	0.117	0.993474796	0.065	1	4.8E-14	1	APR	2015	11	2	1	14-OSU-07	0.00	0.00	30.00
15D10120	14.7 %	1180044-1a	Groundmass	Kerguelen Plateau	Dan Miggins	14.7	FCT-NM (7B22-14)	28.201	0.082	Kuiper et al (2008)	8.82254	0.116	0.00178150	0.116	303.409	0.117	0.993474796	0.065	1	4.8E-14	1	APR	2015	11	27	1	14-OSU-07	0.00	0.00	30.00
15D10121	16.5 %	1180044-1a	Groundmass	Kerguelen Plateau	Dan Miggins	16.5	FCT-NM (7B22-14)	28.201	0.082	Kuiper et al (2008)	8.82254	0.116	0.00178150	0.116	303.409	0.117	0.993474796	0.065	1	4.8E-14	1	APR	2015	11	39	1	14-OSU-07	0.00	0.00	30.00
15D10122	18.5 %	1180044-1a	Groundmass	Kerguelen Plateau	Dan Miggins	18.5	FCT-NM (7B22-14)	28.201	0.082	Kuiper et al (2008)	8.82254	0.116	0.00178150	0.116	303.409	0.117	0.993474796	0.065	1	4.8E-14	1	APR	2015	11	52	1	14-OSU-07	0.00	0.00	30.00
15D10124	19.8 %	1180044-1a	Groundmass	Kerguelen Plateau	Dan Miggins	19.8	FCT-NM (7B22-14)	28.201	0.082	Kuiper et al (2008)	8.82254	0.116	0.00178150	0.116	303.409	0.117	0.993474796	0.065	1	4.8E-14	1	APR	2015	12	18	1	14-OSU-07	0.00	0.00	30.00
15D10125	21.7 %	1180044-1a	Groundmass	Kerguelen Plateau	Dan Miggins	21.7	FCT-NM (7B22-14)	28.201	0.082	Kuiper et al (2008)	8.82254	0.116	0.00178150	0.116	303.409	0.117	0.993474796	0.065	1	4.8E-14	1	APR	2015	12	31	1	14-OSU-07	0.00	0.00	30.00
15D10126	22.8 %	1180044-1a	Groundmass	Kerguelen Plateau	Dan Miggins	22.8	FCT-NM (7B22-14)	28.201	0.082	Kuiper et al (2008)	8.82254	0.116	0.00178150	0.116	303.409	0.117	0.993474796	0.065	1	4.8E-14	1	APR	2015	12	44	1	14-OSU-07	0.00	0.00	30.00
15D10128	24.3 %	1180044-1a	Groundmass	Kerguelen Plateau	Dan Miggins	24.3	FCT-NM (7B22-14)	28.201	0.082	Kuiper et al (2008)	8.82254	0.116	0.00178150	0.116	303.409	0.117	0.993474796	0.065	1	4.8E-14	1	APR	2015	13	9	1	14-OSU-07	0.00	0.00	30.00



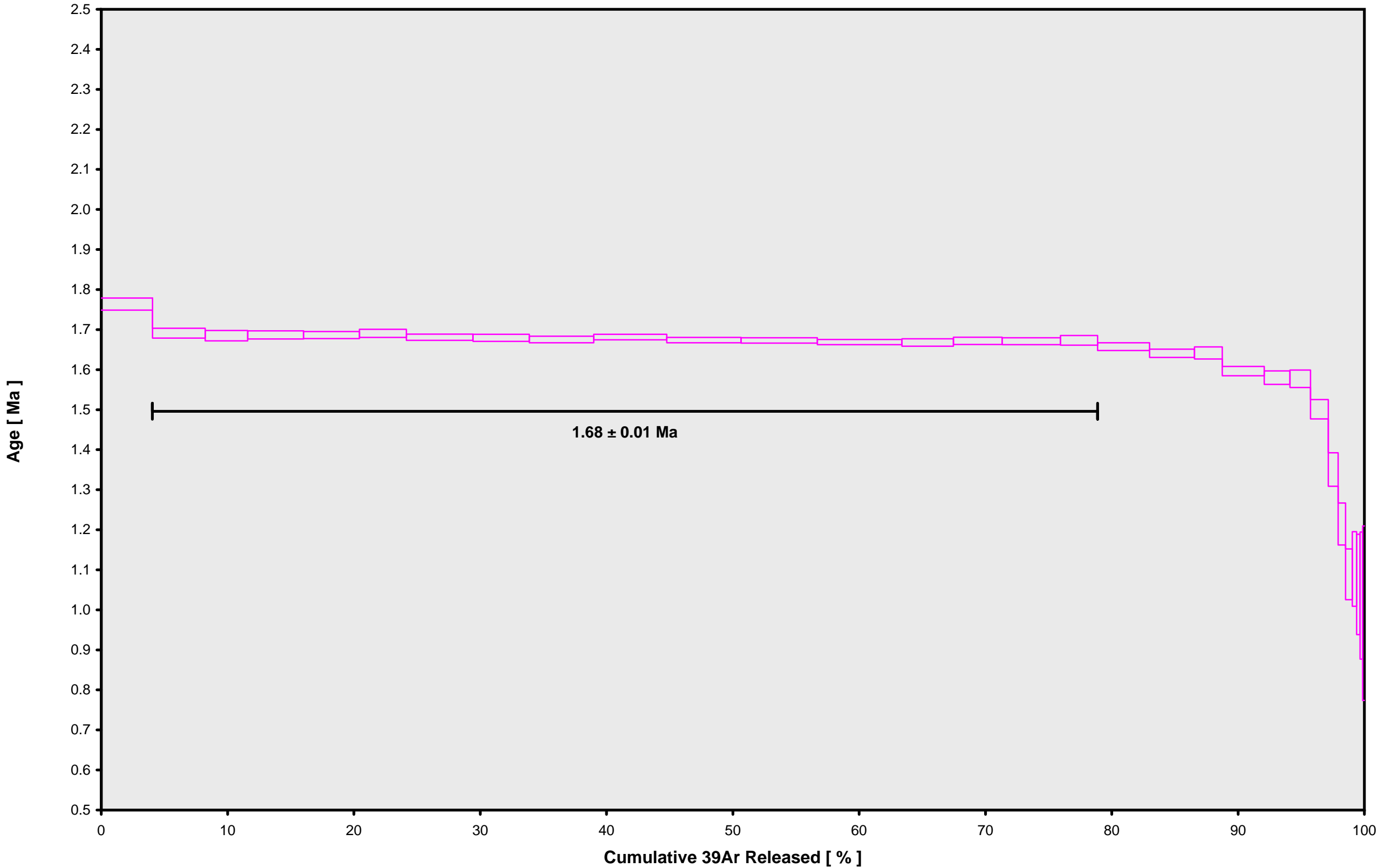
[illegible]



OSU Argon Geochronology Lab																											
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	
15D10088	2.0 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D10090	2.2 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D10091	2.4 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D10092	2.6 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D10094	2.8 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D10095	3.0 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D10096	3.3 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D10097	3.6 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D10099	3.9 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D10100	4.3 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D10101	4.6 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D10102	4.9 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D10104	5.2 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D10105	5.5 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D10106	5.8 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D10108	6.1 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D10109	6.5 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D10110	7.0 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D10112	7.6 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D10113	8.4 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D10114	9.4 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D10116	10.5 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D10117	11.7 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D10118	13.1 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D10120	14.7 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D10121	16.5 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D10122	18.5 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D10124	19.8 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D10125	21.7 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D10126	22.8 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D10128	24.3 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0



15D10087.AGE >>> 1180044-1A >>> KERGUELEN | FALLOON (14-PIL-01) PROJECT



Ar-Ages in Ma

WEIGHTED PLATEAU

$1.68 \pm 0.01$

TOTAL FUSION

$1.66 \pm 0.00$

NORMAL ISOCHRON

$1.67 \pm 0.01$

INVERSE ISOCHRON

$1.67 \pm 0.01$

MSWD (PROBABILITY)

2.81 (0%)

Sample Info

Groundmass

Kerguelen Plateau

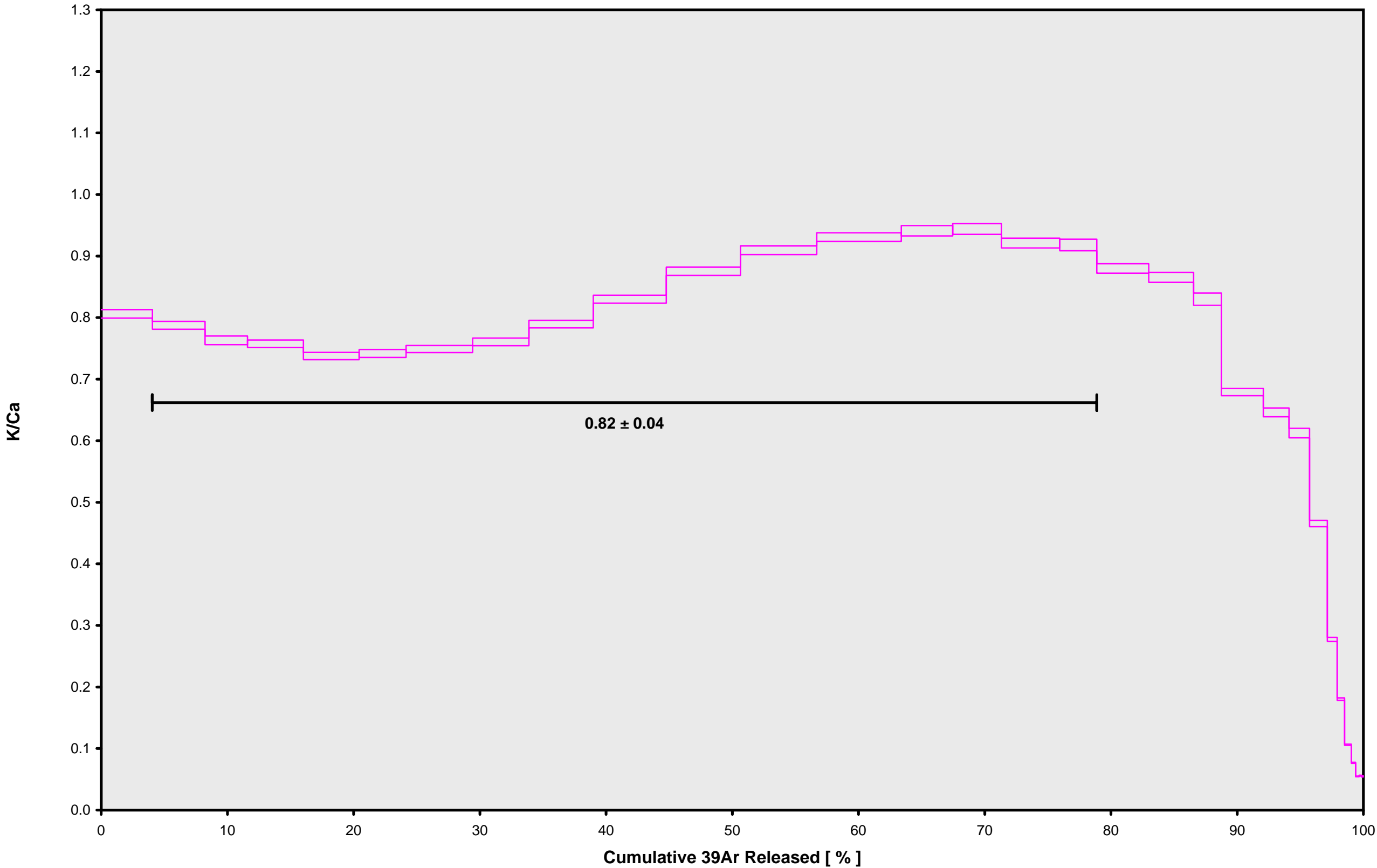
Dan Miggins

IRR = 14-OSU-07 (7B22-14)

J =  $0.00178150 \pm 0.00000207$



15D10087.AGE >>> 1180044-1A >>> KERGUELEN | FALLOON (14-PIL-01) PROJECT



**Ar-Ages in Ma**

**WEIGHTED PLATEAU**

**$1.68 \pm 0.01$**

**TOTAL FUSION**

**$1.66 \pm 0.00$**

**NORMAL ISOCHRON**

**$1.67 \pm 0.01$**

**INVERSE ISOCHRON**

**$1.67 \pm 0.01$**

**Sample Info**

**Groundmass**

**Kerguelen Plateau**

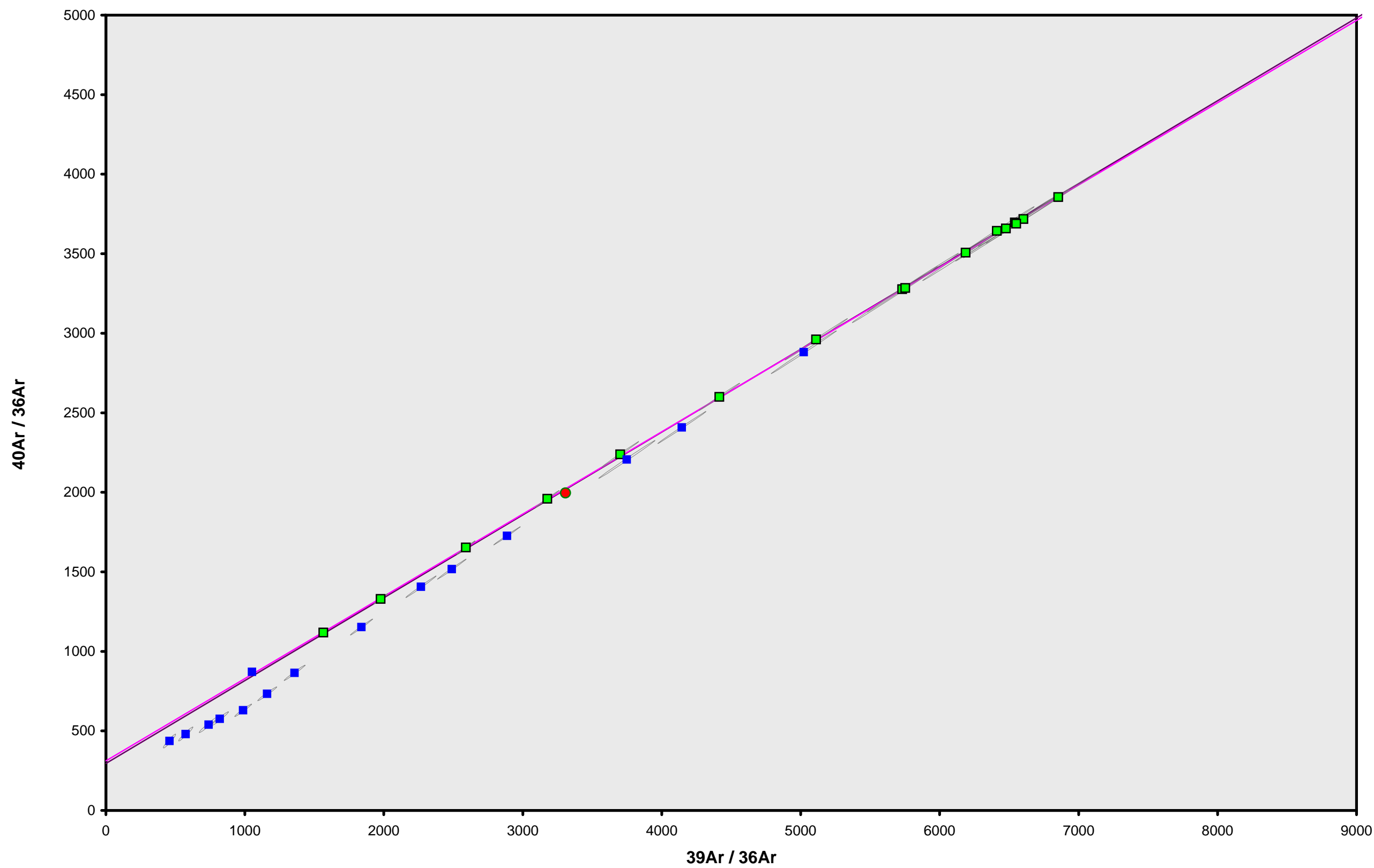
**Dan Miggins**

**IRR = 14-OSU-07 (7B22-14)**

**$J = 0.00178150 \pm 0.00000207$**



15D10087.AGE >>> 1180044-1A >>> KERGUELEN | FALLOON (14-PIL-01) PROJECT



**Ar-Ages in Ma**

**WEIGHTED PLATEAU**  
1.68 ± 0.01

**TOTAL FUSION**  
1.66 ± 0.00

**NORMAL ISOCHRON**  
1.67 ± 0.01

**INVERSE ISOCHRON**  
1.67 ± 0.01

**MSWD (PROBABILITY)**  
1.25 (23%)

**40AR/36AR INTERCEPT**  
311.6 ± 6.9

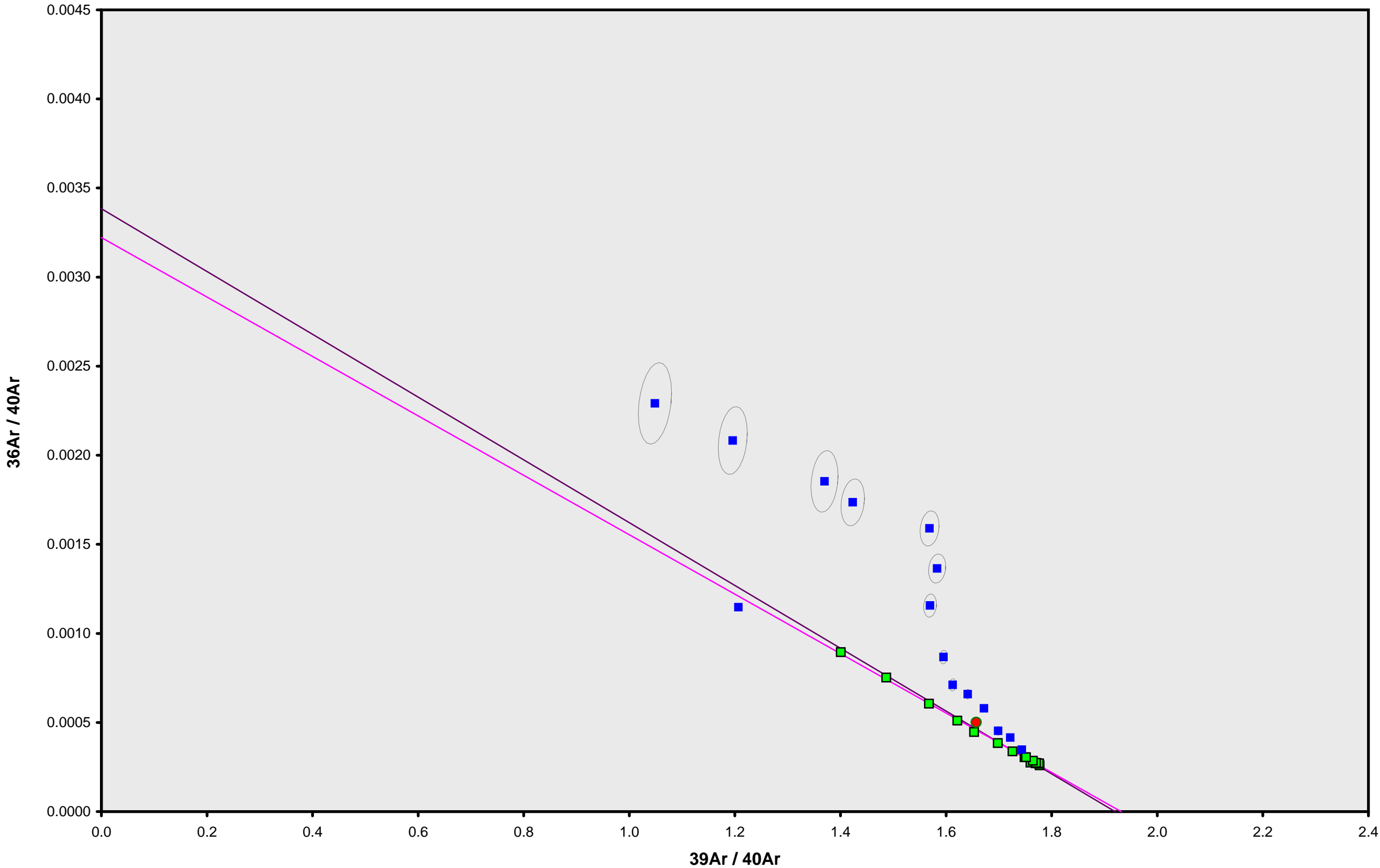
**Sample Info**

Groundmass  
Kerguelen Plateau  
Dan Miggins

IRR = 14-OSU-07 (7B22-14)  
J = 0.00178150 ± 0.00000207



15D10087.AGE >>> 1180044-1A >>> KERGUELEN | FALLOON (14-PIL-01) PROJECT



Ar-Ages in Ma

WEIGHTED PLATEAU

$1.68 \pm 0.01$

TOTAL FUSION

$1.66 \pm 0.00$

NORMAL ISOCHRON

$1.67 \pm 0.01$

INVERSE ISOCHRON

$1.67 \pm 0.01$

MSWD (PROBABILITY)

1.25 (23%)

SPREADING FACTOR

19.5%

40AR/36AR INTERCEPT

$310.4 \pm 7.0$

Sample Info

Groundmass

Kerguelen Plateau

Dan Miggins

IRR = 14-OSU-07 (7B22-14)

J =  $0.00178150 \pm 0.00000207$



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
15D10046	2.0 %	0.560086	24.3629	0.187286	2.43182	21.5208	28.17 ± 2.35	11.51	1.12	0.0429 ± 0.0016
15D10048	2.2 %	0.458137	26.8637	0.153024	2.63174	20.1634	24.41 ± 1.89	12.96	1.21	0.0421 ± 0.0015
15D10049	2.4 %	0.318710	21.5558	0.163886	2.19182	13.2853	19.34 ± 1.95	12.36	1.01	0.0437 ± 0.0019
15D10050	2.6 %	✓ 0.362660	25.7229	0.229025	2.68373	20.4172	24.24 ± 1.70	16.00	1.24	0.0449 ± 0.0016
15D10052	2.8 %	✓ 0.381980	27.9155	0.232874	3.06404	26.2803	27.31 ± 1.66	18.89	1.41	0.0472 ± 0.0015
15D10053	3.0 %	✓ 0.407156	29.0606	0.222666	3.32095	26.4355	25.36 ± 1.44	18.01	1.53	0.0491 ± 0.0015
15D10054	3.3 %	✓ 0.344740	27.6866	0.217638	3.32661	24.9849	23.93 ± 1.41	19.70	1.54	0.0517 ± 0.0016
15D10055	3.6 %	✓ 0.533779	36.7432	0.272506	4.51237	31.7622	22.44 ± 1.16	16.76	2.08	0.0528 ± 0.0012
15D10057	3.9 %	✓ 0.312488	31.6337	0.196578	4.15348	29.6140	22.73 ± 1.02	24.28	1.92	0.0565 ± 0.0014
15D10058	4.3 %	✓ 0.301344	31.7394	0.264666	4.08248	27.4893	21.47 ± 1.04	23.59	1.88	0.0553 ± 0.0014
15D10059	4.6 %	✓ 0.352874	37.5221	0.262848	4.66621	33.6532	22.99 ± 0.97	24.40	2.15	0.0535 ± 0.0012
15D10060	4.9 %	✓ 0.379282	45.5402	0.329935	5.51900	38.5991	22.30 ± 0.86	25.62	2.55	0.0521 ± 0.0010
15D10062	5.2 %	✓ 0.378595	50.0073	0.333582	5.85975	37.6181	20.48 ± 0.76	25.16	2.70	0.0504 ± 0.0009
15D10063	5.5 %	✓ 0.291636	43.5599	0.306050	5.06829	30.8615	19.43 ± 0.78	26.37	2.34	0.0500 ± 0.0010
15D10064	5.8 %	✓ 0.196821	31.2442	0.258892	3.85552	22.7521	18.83 ± 0.96	28.12	1.78	0.0531 ± 0.0014
15D10066	6.1 %	✓ 0.184266	29.8186	0.246006	3.79756	22.8351	19.19 ± 0.98	29.54	1.75	0.0548 ± 0.0016
15D10067	6.5 %	✓ 0.234940	34.8052	0.312379	4.44273	25.2120	18.11 ± 0.85	26.64	2.05	0.0549 ± 0.0013
15D10068	7.0 %	✓ 0.239740	37.1285	0.336535	4.70651	27.5552	18.68 ± 0.83	28.00	2.17	0.0545 ± 0.0013
15D10070	7.6 %	✓ 0.277836	44.5291	0.455192	5.68950	32.8665	18.44 ± 0.73	28.59	2.63	0.0549 ± 0.0011
15D10071	8.4 %	✓ 0.340407	57.3386	0.645531	7.20900	43.5376	19.27 ± 0.60	30.21	3.33	0.0541 ± 0.0008
15D10072	9.4 %	✓ 0.524177	97.1120	1.200151	11.08856	65.9694	18.98 ± 0.49	29.87	5.12	0.0491 ± 0.0006
15D10074	10.5 %	0.578973	130.0253	1.496105	12.68309	88.5084	22.25 ± 0.44	34.09	5.85	0.0419 ± 0.0004
15D10075	11.7 %	0.594388	153.4948	1.289072	12.40316	115.5333	29.64 ± 0.47	39.68	5.72	0.0347 ± 0.0003
15D10076	13.1 %	0.762426	230.9227	1.254643	13.22921	204.1145	48.83 ± 0.56	47.53	6.11	0.0246 ± 0.0002
15D10078	14.7 %	0.900446	298.5660	1.199263	13.25332	284.2633	67.52 ± 0.66	51.65	6.12	0.0191 ± 0.0002
15D10079	16.5 %	1.327071	489.0408	1.558800	16.12316	532.3763	102.93 ± 0.77	57.58	7.44	0.0142 ± 0.0001
15D10080	18.5 %	1.714336	648.5486	1.672874	18.48964	778.8719	130.32 ± 0.83	60.59	8.53	0.0123 ± 0.0001
15D10082	19.8 %	1.356014	501.0826	0.985046	13.45379	699.0285	159.43 ± 1.13	63.56	6.21	0.0115 ± 0.0001
15D10083	21.7 %	1.223155	453.2180	0.742404	12.07089	657.7597	166.85 ± 1.24	64.54	5.57	0.0115 ± 0.0001
15D10084	22.8 %	0.629988	215.1014	0.393673	6.45179	329.4545	156.80 ± 2.02	63.89	2.98	0.0129 ± 0.0002
15D10086	24.3 %	0.415435	132.3138	0.210320	4.23322	213.3304	154.83 ± 2.86	63.47	1.95	0.0138 ± 0.0003
Σ		16.883887	4044.2041	17.629448	216.69293	4526.6532				

Information on Analysis	Results	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD	39Ar(k) (%,n)	K/Ca ± 2σ
Sample = 274-3 Material = Groundmass Location = Kerguelen Plateau Analyst = Dan Miggins Project = KERGUELEN   FALLOON (14-I Mass Discrimination Law = LIN Irradiation = 14-OSU-07 (7B23-14) J = 0.00177389 ± 0.00000206 FCT-NM = 28.201 ± 0.023 Ma	Age Plateau Error Mean	6.33159 ± 0.30828 ± 4.87%	20.20 ± 0.98 ± 4.85%	22.80 0% 1.69 4.7750	40.17 18 2σ Confidence Limit Error Magnification	0.0518 ± 0.0013
	Total Fusion Age	20.88971 ± 0.06220 ± 0.30%	65.80 ± 0.24 ± 0.37%		31	0.0230 ± 0.0001



Normal Isochron		39(k)/36(a) ± 2σ		40(a+r)/36(a) ± 2σ	r.i.
15D10046	2.0 %		4.34 ± 0.14	333.92 ± 3.35	0.2782
15D10048	2.2 %		5.74 ± 0.18	339.51 ± 3.58	0.2988
15D10049	2.4 %		6.88 ± 0.26	337.18 ± 4.39	0.2858
15D10050	2.6 %	✓	7.40 ± 0.23	351.80 ± 4.21	0.3365
15D10052	2.8 %	✓	8.02 ± 0.23	364.30 ± 4.59	0.3942
15D10053	3.0 %	✓	8.16 ± 0.21	360.43 ± 4.05	0.3935
15D10054	3.3 %	✓	9.65 ± 0.25	367.97 ± 4.82	0.4513
15D10055	3.6 %	✓	8.45 ± 0.17	355.00 ± 3.42	0.4443
15D10057	3.9 %	✓	13.29 ± 0.29	390.27 ± 4.97	0.5083
15D10058	4.3 %	✓	13.55 ± 0.31	386.72 ± 5.14	0.5096
15D10059	4.6 %	✓	13.22 ± 0.27	390.87 ± 4.78	0.5439
15D10060	4.9 %	✓	14.55 ± 0.26	397.27 ± 4.81	0.6258
15D10062	5.2 %	✓	15.48 ± 0.26	394.86 ± 4.46	0.6012
15D10063	5.5 %	✓	17.38 ± 0.33	401.32 ± 5.16	0.5867
15D10064	5.8 %	✓	19.59 ± 0.51	411.10 ± 7.09	0.5694
15D10066	6.1 %	✓	20.61 ± 0.56	419.42 ± 7.67	0.5789
15D10067	6.5 %	✓	18.91 ± 0.42	402.81 ± 6.12	0.5947
15D10068	7.0 %	✓	19.63 ± 0.45	410.44 ± 6.21	0.5806
15D10070	7.6 %	✓	20.48 ± 0.40	413.79 ± 5.82	0.6427
15D10071	8.4 %	✓	21.18 ± 0.33	423.40 ± 5.17	0.7029
15D10072	9.4 %	✓	21.15 ± 0.26	421.35 ± 4.34	0.7762
15D10074	10.5 %		21.91 ± 0.25	448.37 ± 4.29	0.8026
15D10075	11.7 %		20.87 ± 0.23	489.87 ± 4.58	0.8075
15D10076	13.1 %		17.35 ± 0.18	563.22 ± 4.83	0.7937
15D10078	14.7 %		14.72 ± 0.15	611.19 ± 5.15	0.8150
15D10079	16.5 %		12.15 ± 0.11	696.67 ± 5.35	0.8263
15D10080	18.5 %		10.79 ± 0.09	749.83 ± 5.49	0.8472
15D10082	19.8 %		9.92 ± 0.09	811.00 ± 6.00	0.7742
15D10083	21.7 %		9.87 ± 0.10	833.26 ± 6.27	0.7504
15D10084	22.8 %		10.24 ± 0.16	818.45 ± 7.96	0.6188
15D10086	24.3 %		10.19 ± 0.21	809.01 ± 8.54	0.4937

Results	40(a)/36(a) ± 2σ		40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD
Normal Isochron	321.68 ± 6.57		4.70185 ± 0.43462	15.02 ± 1.38	4.69
Error Chron	± 2.04%		± 9.24%	± 9.21%	0%
				Full External Error ± 1.42	
				Analytical Error ± 1.38	
Statistics	2σ Confidence Limit	1.71	Convergence	0.000016169059	
	Error Magnification	2.1649	Number of Iterations	6	
	Number of Data Points	18	Calculated Line	Weighted York-2	



Inverse Isochron		39(k)/40(a+r) ± 2σ		36(a)/40(a+r) ± 2σ	r.i.
15D10046	2.0 %	0.0130026 ± 0.0004016		0.00299469 ± 0.00003003	0.0352
15D10048	2.2 %	0.0169197 ± 0.0005021		0.00294541 ± 0.00003103	0.0423
15D10049	2.4 %	0.0203959 ± 0.0007490		0.00296574 ± 0.00003860	0.0566
15D10050	2.6 %	0.0210351 ± 0.0006167		0.00284254 ± 0.00003405	0.0517
15D10052	2.8 %	0.0220188 ± 0.0005872		0.00274499 ± 0.00003461	0.0443
15D10053	3.0 %	0.0226300 ± 0.0005318		0.00277449 ± 0.00003114	0.0501
15D10054	3.3 %	0.0262236 ± 0.0006089		0.00271758 ± 0.00003557	0.0589
15D10055	3.6 %	0.0238127 ± 0.0004232		0.00281687 ± 0.00002714	0.0466
15D10057	3.9 %	0.0340577 ± 0.0006491		0.00256234 ± 0.00003260	0.0791
15D10058	4.3 %	0.0350318 ± 0.0006942		0.00258583 ± 0.00003435	0.0799
15D10059	4.6 %	0.0338309 ± 0.0005759		0.00255840 ± 0.00003130	0.0720
15D10060	4.9 %	0.0366281 ± 0.0005063		0.00251719 ± 0.00003047	0.0755
15D10062	5.2 %	0.0391975 ± 0.0005319		0.00253253 ± 0.00002863	0.0835
15D10063	5.5 %	0.0433039 ± 0.0006744		0.00249177 ± 0.00003202	0.1044
15D10064	5.8 %	0.0476503 ± 0.0010186		0.00243251 ± 0.00004194	0.1190
15D10066	6.1 %	0.0491366 ± 0.0010921		0.00238422 ± 0.00004361	0.1180
15D10067	6.5 %	0.0469451 ± 0.0008365		0.00248254 ± 0.00003770	0.1178
15D10068	7.0 %	0.0478312 ± 0.0008897		0.00243642 ± 0.00003688	0.1046
15D10070	7.6 %	0.0494881 ± 0.0007428		0.00241666 ± 0.00003398	0.1022
15D10071	8.4 %	0.0500181 ± 0.0005636		0.00236184 ± 0.00002883	0.0999
15D10072	9.4 %	0.0502054 ± 0.0003975		0.00237331 ± 0.00002443	0.0723
15D10074	10.5 %	0.0488572 ± 0.0003319		0.00223029 ± 0.00002134	0.0661
15D10075	11.7 %	0.0425969 ± 0.0002800		0.00204134 ± 0.00001908	0.0557
15D10076	13.1 %	0.0308078 ± 0.0001982		0.00177551 ± 0.00001523	0.0287
15D10078	14.7 %	0.0240818 ± 0.0001423		0.00163615 ± 0.00001378	0.0198
15D10079	16.5 %	0.0174394 ± 0.0000907		0.00143541 ± 0.00001102	0.0090
15D10080	18.5 %	0.0143837 ± 0.0000658		0.00133364 ± 0.00000976	0.0058
15D10082	19.8 %	0.0122337 ± 0.0000736		0.00123304 ± 0.00000912	0.0058
15D10083	21.7 %	0.0118435 ± 0.0000781		0.00120011 ± 0.00000903	0.0061
15D10084	22.8 %	0.0125128 ± 0.0001527		0.00122182 ± 0.00001188	0.0094
15D10086	24.3 %	0.0125954 ± 0.0002289		0.00123608 ± 0.00001305	0.0133

Results	40(a)/36(a) ± 2σ		40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD
Inverse Isochron Error Chron	321.97 ± 6.60 ± 2.05%		4.69262 ± 0.42771 ± 9.11%	14.99 ± 1.36 ± 9.08%	4.69 0%
			Full External Error ± 1.40 Analytical Error ± 1.36		
Statistics	2σ Confidence Limit	1.71	Convergence	0.0000761462	
	Error Magnification	2.1649	Number of Iterations	3	
	Number of Data Points	18	Calculated Line	Weighted York-2	
	Spreading Factor	13.7%			



OSU Argon Geochronology Lab																
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
15D10046	2.0 %	0.566546	0.468	24.3629	1.096	0.319979	14.126	2.44822	1.525	187.0287	0.165	8.84965 ± 0.74405	28.17 ± 2.35	11.51	1.12	0.0429 ± 0.0016
15D10048	2.2 %	0.465252	0.487	26.8637	1.004	0.268972	17.265	2.64982	1.462	155.5457	0.182	7.66162 ± 0.59650	24.41 ± 1.89	12.96	1.21	0.0421 ± 0.0015
15D10049	2.4 %	0.324424	0.586	21.5558	1.226	0.248696	17.468	2.20633	1.806	107.4662	0.260	6.06128 ± 0.61350	19.34 ± 1.95	12.36	1.01	0.0437 ± 0.0019
15D10050	2.6 %	✓ 0.369485	0.549	25.7229	1.066	0.327705	13.853	2.70104	1.441	127.5861	0.213	7.60776 ± 0.53812	24.24 ± 1.70	16.00	1.24	0.0449 ± 0.0016
15D10052	2.8 %	✓ 0.389384	0.588	27.9155	0.963	0.339523	13.740	3.08283	1.311	139.1586	0.193	8.57702 ± 0.52675	27.31 ± 1.66	18.89	1.41	0.0472 ± 0.0015
15D10053	3.0 %	✓ 0.414861	0.521	29.0606	0.951	0.336960	13.520	3.34051	1.154	146.7535	0.182	7.96021 ± 0.45600	25.36 ± 1.44	18.01	1.53	0.0491 ± 0.0015
15D10054	3.3 %	✓ 0.352081	0.606	27.6866	1.015	0.320312	13.609	3.34524	1.135	126.8590	0.211	7.51062 ± 0.44643	23.93 ± 1.41	19.70	1.54	0.0517 ± 0.0016
15D10055	3.6 %	✓ 0.543519	0.452	36.7432	0.776	0.424131	10.798	4.53710	0.873	189.4984	0.141	7.03891 ± 0.36464	22.44 ± 1.16	16.76	2.08	0.0528 ± 0.0012
15D10057	3.9 %	✓ 0.320868	0.581	31.6337	0.819	0.302688	15.015	4.17477	0.923	121.9582	0.219	7.12992 ± 0.32337	22.73 ± 1.02	24.28	1.92	0.0565 ± 0.0014
15D10058	4.3 %	✓ 0.309762	0.606	31.7394	0.877	0.367887	11.740	4.10384	0.959	116.5407	0.229	6.73348 ± 0.32850	21.47 ± 1.04	23.59	1.88	0.0553 ± 0.0014
15D10059	4.6 %	✓ 0.362818	0.564	37.5221	0.721	0.382423	11.482	4.69146	0.824	137.9322	0.194	7.21211 ± 0.30763	22.99 ± 0.97	24.40	2.15	0.0535 ± 0.0012
15D10060	4.9 %	✓ 0.391353	0.560	45.5402	0.659	0.464262	9.788	5.54965	0.664	150.6824	0.178	6.99385 ± 0.27083	22.30 ± 0.86	25.62	2.55	0.0521 ± 0.0010
15D10062	5.2 %	✓ 0.391846	0.518	50.0073	0.610	0.471720	9.691	5.89341	0.651	149.4990	0.179	6.41974 ± 0.23943	20.48 ± 0.76	25.16	2.70	0.0504 ± 0.0009
15D10063	5.5 %	✓ 0.303181	0.577	43.5599	0.688	0.418839	10.600	5.09761	0.740	117.0451	0.229	6.08913 ± 0.24709	19.43 ± 0.78	26.37	2.34	0.0500 ± 0.0010
15D10064	5.8 %	✓ 0.205108	0.763	31.2442	0.882	0.339988	13.445	3.87655	1.011	80.9166	0.331	5.90117 ± 0.30229	18.83 ± 0.96	28.12	1.78	0.0531 ± 0.0014
15D10066	6.1 %	✓ 0.192174	0.811	29.8186	0.962	0.324076	13.379	3.81762	1.050	77.2895	0.346	6.01310 ± 0.30809	19.19 ± 0.98	29.54	1.75	0.0548 ± 0.0016
15D10067	6.5 %	✓ 0.244174	0.678	34.8052	0.840	0.407331	10.775	4.46616	0.841	94.6412	0.282	5.67489 ± 0.26872	18.11 ± 0.85	26.64	2.05	0.0549 ± 0.0013
15D10068	7.0 %	✓ 0.249591	0.678	37.1285	0.757	0.435419	10.409	4.73150	0.885	98.4031	0.271	5.85470 ± 0.26263	18.68 ± 0.83	28.00	2.17	0.0545 ± 0.0013
15D10070	7.6 %	✓ 0.289658	0.636	44.5291	0.648	0.572485	7.688	5.71946	0.710	114.9726	0.232	5.77669 ± 0.22866	18.44 ± 0.73	28.59	2.63	0.0549 ± 0.0011
15D10071	8.4 %	✓ 0.355640	0.556	57.3386	0.554	0.791988	5.677	7.24759	0.529	144.1352	0.185	6.03933 ± 0.18960	19.27 ± 0.60	30.21	3.33	0.0541 ± 0.0008
15D10072	9.4 %	✓ 0.549991	0.476	97.1120	0.420	1.425657	3.053	11.15392	0.375	220.8750	0.121	5.94933 ± 0.15453	18.98 ± 0.49	29.87	5.12	0.0491 ± 0.0006
15D10074	10.5 %	0.613519	0.440	130.0253	0.378	1.750456	2.532	12.77059	0.321	259.6077	0.104	6.97846 ± 0.14044	22.25 ± 0.44	34.09	5.85	0.0419 ± 0.0004
15D10075	11.7 %	0.635100	0.428	153.4948	0.366	1.543445	2.877	12.50646	0.313	291.1874	0.092	9.31483 ± 0.14891	29.64 ± 0.47	39.68	5.72	0.0347 ± 0.0003
15D10076	13.1 %	0.823574	0.392	230.9227	0.344	1.550899	2.760	13.38462	0.312	429.4249	0.063	15.42908 ± 0.17896	48.83 ± 0.56	47.53	6.11	0.0246 ± 0.0002
15D10078	14.7 %	0.979444	0.384	298.5660	0.335	1.522529	2.875	13.45425	0.287	550.3585	0.050	21.44847 ± 0.21334	67.52 ± 0.66	51.65	6.12	0.0191 ± 0.0002
15D10079	16.5 %	1.456407	0.347	489.0408	0.328	1.997108	2.218	16.45229	0.253	924.5419	0.030	33.01934 ± 0.25476	102.93 ± 0.77	57.58	7.44	0.0142 ± 0.0001
15D10080	18.5 %	1.885799	0.331	648.5486	0.326	2.212710	1.965	18.92611	0.222	1285.4769	0.022	42.12478 ± 0.27893	130.32 ± 0.83	60.59	8.53	0.0123 ± 0.0001
15D10082	19.8 %	1.488444	0.335	501.0826	0.328	1.398554	3.258	13.79102	0.292	1099.7441	0.025	51.95775 ± 0.38350	159.43 ± 1.13	63.56	6.21	0.0115 ± 0.0001
15D10083	21.7 %	1.342914	0.341	453.2180	0.329	1.114678	4.034	12.37590	0.320	1019.2143	0.027	54.49141 ± 0.42540	166.85 ± 1.24	64.54	5.57	0.0115 ± 0.0001
15D10084	22.8 %	0.686832	0.442	215.1014	0.348	0.587829	7.437	6.59655	0.594	515.6224	0.053	51.06405 ± 0.68575	156.80 ± 2.02	63.89	2.98	0.0129 ± 0.0002
15D10086	24.3 %	0.450397	0.481	132.3138	0.380	0.337978	13.257	4.32226	0.887	336.0957	0.080	50.39438 ± 0.96971	154.83 ± 2.86	63.47	1.95	0.0138 ± 0.0003
Σ		17.954145	0.088	4044.2041	0.101	23.307227	1.066	219.41468	0.100	9516.0607	0.016					

Information on Analysis and Constants Used in Calculations	Results	40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD	39Ar(k) (% <sub>n</sub> )	K/Ca ± 2σ
Sample = 274-3	Age Plateau		6.33159 ± 0.30828	20.20 ± 0.98	22.80	40.17	0.0518 ± 0.0013
Material = Groundmass	Error Mean		± 4.87%	± 4.85%	0%	18	
Location = Kerguelen Plateau				Full External Error ± 1.08	1.69	2σ Confidence Limit	
Analyst = Dan Miggins				Analytical Error ± 0.98	4.7750	Error Magnification	
Project = KERGUELEN   FALLOON (14-PIL-01)							
Mass Discrimination Law = LIN							
Irradiation = 14-OSU-07 (7B23-14)	Total Fusion Age		20.88971 ± 0.06220	65.80 ± 0.24		31	0.0230 ± 0.0001
J = 0.00177389 ± 0.00000206			± 0.30%	± 0.37%			
FCT-NM = 28.201 ± 0.023 Ma				Full External Error ± 1.49			
IGSN = Undefined				Analytical Error ± 0.19			
Preferred Age = Undefined							
Classification = Undefined	Normal Isochron	321.68 ± 6.57	4.70185 ± 0.43462	15.02 ± 1.38	4.69	40.17	
Experiment Type = Incremental Heating	Error Chron	± 2.04%	± 9.24%	± 9.21%	0%	18	
Extraction Method = Undefined				Full External Error ± 1.42	1.71	2σ Confidence Limit	
Heating = 77 sec				Analytical Error ± 1.38	2.1649	Error Magnification	
Isolation = 6.00 min					6	Number of Iterations	
Instrument = ARGUS-VI-D					0.0000161691	Convergence	
Lithology = Undefined							
Lat-Lon = Undefined - Undefined	Inverse Isochron	321.97 ± 6.60	4.69262 ± 0.42771	14.99 ± 1.36	4.69	40.17	
Collector Calibrations = 40Ar 36Ar	Error Chron	± 2.05%	± 9.11%	± 9.08%	0%	18	
				Full External Error ± 1.40	1.71	2σ Confidence Limit	



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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																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						



Additional Parameters		40Ar/39Ar	1σ	37Ar/39Ar	1σ	36Ar/39Ar	1σ	Time (days)	37Ar (decay)	39Ar (decay)	40Ar (moles)
15D10046	2.0 %	76.393811	1.171907	9.951285	0.186909	0.231411	0.003692	90.178	5.951596	1.00063738	8.977E-12
15D10048	2.2 %	58.700397	0.865034	10.137913	0.179826	0.175578	0.002706	90.197	5.953801	1.00063751	7.466E-12
15D10049	2.4 %	48.708117	0.888526	9.769999	0.213224	0.147043	0.002791	90.207	5.955026	1.00063759	5.158E-12
15D10050	2.6 % ✓	47.235841	0.688104	9.523320	0.170725	0.136793	0.002110	90.217	5.956170	1.00063765	6.124E-12
15D10052	2.8 % ✓	45.139910	0.598337	9.055173	0.147337	0.126307	0.001816	90.235	5.958376	1.00063779	6.680E-12
15D10053	3.0 % ✓	43.931454	0.513239	8.699443	0.130116	0.124191	0.001572	90.245	5.959520	1.00063786	7.044E-12
15D10054	3.3 % ✓	37.922199	0.437861	8.276405	0.126039	0.105248	0.001354	90.255	5.960665	1.00063792	6.089E-12
15D10055	3.6 % ✓	41.766440	0.369196	8.098398	0.094562	0.119794	0.001177	90.264	5.961728	1.00063799	9.096E-12
15D10057	3.9 % ✓	29.213191	0.277057	7.577352	0.093498	0.076859	0.000838	90.282	5.963854	1.00063811	5.854E-12
15D10058	4.3 % ✓	28.397947	0.279970	7.734070	0.100507	0.075481	0.000856	90.292	5.965000	1.00063818	5.594E-12
15D10059	4.6 % ✓	29.400697	0.248983	7.997965	0.087576	0.077336	0.000772	90.300	5.965981	1.00063824	6.621E-12
15D10060	4.9 % ✓	27.151703	0.186703	8.205962	0.076754	0.070518	0.000613	90.309	5.967045	1.00063831	7.233E-12
15D10062	5.2 % ✓	25.367144	0.171196	8.485289	0.075659	0.066489	0.000553	90.326	5.969092	1.00063843	7.176E-12
15D10063	5.5 % ✓	22.960787	0.177857	8.545153	0.086375	0.059475	0.000558	90.335	5.970075	1.00063849	5.618E-12
15D10064	5.8 % ✓	20.873379	0.221997	8.059804	0.108115	0.052910	0.000670	90.343	5.971057	1.00063855	3.884E-12
15D10066	6.1 % ✓	20.245446	0.223911	7.810789	0.111245	0.050339	0.000668	90.360	5.973105	1.00063867	3.710E-12
15D10067	6.5 % ✓	21.190745	0.187902	7.793109	0.092613	0.054672	0.000590	90.369	5.974170	1.00063873	4.543E-12
15D10068	7.0 % ✓	20.797435	0.192487	7.847093	0.091391	0.052751	0.000588	90.378	5.975154	1.00063879	4.723E-12
15D10070	7.6 % ✓	20.101996	0.150155	7.785543	0.074839	0.050644	0.000483	90.395	5.977203	1.00063891	5.519E-12
15D10071	8.4 % ✓	19.887329	0.111501	7.911403	0.060582	0.049070	0.000377	90.404	5.978269	1.00063898	6.918E-12
15D10072	9.4 % ✓	19.802462	0.077973	8.706542	0.048981	0.049309	0.000299	90.412	5.979253	1.00063904	1.060E-11
15D10074	10.5 %	20.328556	0.068616	10.181616	0.050520	0.048042	0.000262	90.430	5.981304	1.00063916	1.246E-11
15D10075	11.7 %	23.282957	0.075925	12.273240	0.059051	0.050782	0.000269	90.439	5.982371	1.00063922	1.398E-11
15D10076	13.1 %	32.083466	0.102065	17.252845	0.080104	0.061531	0.000308	90.447	5.983355	1.00063928	2.061E-11
15D10078	14.7 %	40.905916	0.119070	22.191198	0.097840	0.072798	0.000349	90.465	5.985408	1.00063940	2.642E-11
15D10079	16.5 %	56.195345	0.143169	29.724791	0.123129	0.088523	0.000380	90.474	5.986475	1.00063947	4.438E-11
15D10080	18.5 %	67.920822	0.151709	34.267403	0.135132	0.099640	0.000397	90.483	5.987543	1.00063953	6.170E-11
15D10082	19.8 %	79.743516	0.234030	36.333983	0.159520	0.107929	0.000480	90.500	5.989596	1.00063965	5.279E-11
15D10083	21.7 %	82.354734	0.264852	36.621004	0.168052	0.108510	0.000507	90.509	5.990664	1.00063972	4.892E-11
15D10084	22.8 %	78.165436	0.466467	32.608155	0.224601	0.104120	0.000772	90.518	5.991733	1.00063978	2.475E-11
15D10086	24.3 %	77.759155	0.692227	30.612141	0.295272	0.104204	0.001051	90.536	5.993870	1.00063991	1.613E-11



Procedure Blanks		36Ar [fA]	1σ	37Ar [fA]	1σ	38Ar [fA]	1σ	39Ar [fA]	1σ	40Ar [fA]	1σ
15D10046	2.0 %	0.0275365	0.0008409	0.0138519	0.0299982	0.0149406	0.0346310	0.0429639	0.0286709	8.4178688	0.2652094
15D10048	2.2 %	0.0273313	0.0008409	0.0187312	0.0299982	0.0219685	0.0346310	0.0466386	0.0286709	8.2662486	0.2652094
15D10049	2.4 %	0.0270979	0.0008409	0.0191654	0.0299982	0.0255810	0.0346310	0.0452299	0.0286709	8.1653979	0.2652094
15D10050	2.6 %	0.0268209	0.0008409	0.0184679	0.0299982	0.0287645	0.0346310	0.0422664	0.0286709	8.0637886	0.2652094
15D10052	2.8 %	0.0261689	0.0008409	0.0149900	0.0299982	0.0343911	0.0346310	0.0334578	0.0286709	7.8554949	0.2652094
15D10053	3.0 %	0.0257903	0.0008409	0.0124751	0.0299982	0.0370426	0.0346310	0.0279301	0.0286709	7.7448902	0.2652094
15D10054	3.3 %	0.0253967	0.0008409	0.0097092	0.0299982	0.0395125	0.0346310	0.0221384	0.0286709	7.6348896	0.2652094
15D10055	3.6 %	0.0250253	0.0008409	0.0070505	0.0299982	0.0416433	0.0346310	0.0167543	0.0286709	7.5347364	0.2652094
15D10057	3.9 %	0.0242910	0.0008409	0.0018899	0.0299982	0.0454350	0.0346310	0.0067137	0.0286709	7.3450815	0.2652094
15D10058	4.3 %	0.0239126	0.0008409	0.0006170	0.0299982	0.0472172	0.0346310	0.0020567	0.0286709	7.2512665	0.2652094
15D10059	4.6 %	0.0236035	0.0008409	0.0025375	0.0299982	0.0486002	0.0346310	0.0013610	0.0286709	7.1766572	0.2652094
15D10060	4.9 %	0.0232883	0.0008409	0.0043390	0.0299982	0.0499479	0.0346310	0.0043697	0.0286709	7.1026769	0.2652094
15D10062	5.2 %	0.0227516	0.0008409	0.0069045	0.0299982	0.0520993	0.0346310	0.0078659	0.0286709	6.9829911	0.2652094
15D10063	5.5 %	0.0225306	0.0008409	0.0077083	0.0299982	0.0529263	0.0346310	0.0083954	0.0286709	6.9371027	0.2652094
15D10064	5.8 %	0.0223355	0.0008409	0.0082503	0.0299982	0.0536198	0.0346310	0.0081579	0.0286709	6.8992284	0.2652094
15D10066	6.1 %	0.0220154	0.0008409	0.0086653	0.0299982	0.0546360	0.0346310	0.0052370	0.0286709	6.8472411	0.2652094
15D10067	6.5 %	0.0218956	0.0008409	0.0086044	0.0299982	0.0549354	0.0346310	0.0024915	0.0286709	6.8350074	0.2652094
15D10068	7.0 %	0.0218130	0.0008409	0.0084651	0.0299982	0.0550729	0.0346310	0.0007160	0.0286709	6.8328280	0.2652094
15D10070	7.6 %	0.0217225	0.0008409	0.0082606	0.0299982	0.0549305	0.0346310	0.0091421	0.0286709	6.8562809	0.2652094
15D10071	8.4 %	0.0217154	0.0008409	0.0084186	0.0299982	0.0546276	0.0346310	0.0142277	0.0286709	6.8831488	0.2652094
15D10072	9.4 %	0.0217301	0.0008409	0.0088792	0.0299982	0.0542090	0.0346310	0.0191822	0.0286709	6.9165596	0.2652094
15D10074	10.5 %	0.0218139	0.0008409	0.0113643	0.0299982	0.0529082	0.0346310	0.0296777	0.0286709	7.0112916	0.2652094
15D10075	11.7 %	0.0218780	0.0008409	0.0138039	0.0299982	0.0520029	0.0346310	0.0348431	0.0286709	7.0729916	0.2652094
15D10076	13.1 %	0.0219440	0.0008409	0.0169758	0.0299982	0.0510282	0.0346310	0.0391702	0.0286709	7.1367728	0.2652094
15D10078	14.7 %	0.0220823	0.0008409	0.0271898	0.0299982	0.0485689	0.0346310	0.0459015	0.0286709	7.2879666	0.2652094
15D10079	16.5 %	0.0221425	0.0008409	0.0348731	0.0299982	0.0470612	0.0346310	0.0476392	0.0286709	7.3746880	0.2652094
15D10080	18.5 %	0.0221852	0.0008409	0.0445160	0.0299982	0.0453968	0.0346310	0.0477574	0.0286709	7.4656242	0.2652094
15D10082	19.8 %	0.0221887	0.0008409	0.0695988	0.0299982	0.0417559	0.0346310	0.0421521	0.0286709	7.6480928	0.2652094
15D10083	21.7 %	0.0221328	0.0008409	0.0866154	0.0299982	0.0396337	0.0346310	0.0354871	0.0286709	7.7444823	0.2652094
15D10084	22.8 %	0.0220250	0.0008409	0.1067684	0.0299982	0.0373549	0.0346310	0.0257298	0.0286709	7.8400748	0.2652094
15D10086	24.3 %	0.0216120	0.0008409	0.1578552	0.0299982	0.0323274	0.0346310	0.0048001	0.0286709	8.0227019	0.2652094



OSU Argon Geochronology Lab																									
Intercept Values	36Ar					37Ar					38Ar					39Ar					40Ar				
	[fA]	1σ	r2			[fA]	1σ	r2			[fA]	1σ	r2			[fA]	1σ	r2			[fA]	1σ	r2		
15D10046	2.0 %	0.559117	0.001828	0.5953	EXP 150 of 150	3.9997	0.0295	0.3535	EXP 150 of 150	0.300866	0.028116	0.0001	EXP 150 of 150	2.47370	0.02345	0.0666	EXP 150 of 150	195.9977	0.1595	0.3184	EXP 150 of 150				
15D10048	2.2 %	0.463869	0.001537	0.6593	EXP 150 of 150	4.4051	0.0295	0.4741	EXP 150 of 150	0.243496	0.030018	0.0029	EXP 150 of 150	2.67754	0.02560	0.1086	EXP 150 of 150	164.2703	0.1001	0.6083	EXP 150 of 150				
15D10049	2.4 %	0.331500	0.001329	0.4620	EXP 150 of 150	3.5299	0.0294	0.3016	EXP 149 of 150	0.219872	0.025275	0.0058	EXP 150 of 150	2.23580	0.02721	0.0811	EXP 149 of 150	115.9482	0.0907	0.1967	EXP 149 of 150				
15D10050	2.6 %	0.373502	0.001416	0.5911	EXP 150 of 150	4.2159	0.0309	0.4176	EXP 150 of 150	0.294667	0.028425	0.0152	EXP 150 of 150	2.72402	0.02586	0.1679	EXP 150 of 150	136.0258	0.0624	0.7554	EXP 150 of 150				
15D10052	2.8 %	0.391521	0.001704	0.5898	EXP 150 of 150	4.5786	0.0290	0.4598	EXP 150 of 150	0.300705	0.030338	0.0054	EXP 150 of 150	3.09427	0.02802	0.2415	EXP 150 of 150	147.4241	0.0460	0.9559	EXP 150 of 150				
15D10053	3.0 %	0.415047	0.001501	0.6788	EXP 149 of 150	4.7686	0.0305	0.4658	EXP 150 of 150	0.295524	0.028676	0.0000	EXP 150 of 150	3.34458	0.02527	0.2754	EXP 149 of 150	154.9308	0.0342	0.9847	EXP 150 of 150				
15D10054	3.3 %	0.355749	0.001572	0.5766	EXP 150 of 150	4.5444	0.0320	0.4150	EXP 150 of 150	0.276622	0.025523	0.0004	EXP 150 of 150	3.34349	0.02439	0.3163	EXP 150 of 150	134.8677	0.0448	0.9489	EXP 150 of 150				
15D10055	3.6 %	0.535000	0.001625	0.7358	EXP 150 of 150	6.0357	0.0303	0.5533	EXP 150 of 150	0.376957	0.029045	0.0034	EXP 150 of 150	4.52145	0.02673	0.4153	EXP 150 of 150	197.5915	0.0401	0.9936	EXP 150 of 150				
15D10057	3.9 %	0.325356	0.001291	0.5708	EXP 150 of 150	5.1987	0.0252	0.5992	EXP 150 of 150	0.253306	0.028508	0.0095	EXP 150 of 150	4.15166	0.02517	0.4534	EXP 150 of 150	129.6627	0.0375	0.9648	EXP 150 of 150				
15D10058	4.3 %	0.314557	0.001323	0.5601	EXP 150 of 150	5.2176	0.0302	0.4504	EXP 148 of 150	0.315872	0.024847	0.0221	EXP 150 of 150	4.07659	0.02641	0.2927	EXP 150 of 150	124.1353	0.0384	0.9504	EXP 150 of 150				
15D10059	4.6 %	0.364030	0.001449	0.6279	EXP 150 of 150	6.1690	0.0261	0.6244	EXP 150 of 150	0.328836	0.026049	0.0090	EXP 150 of 150	4.65659	0.02537	0.4891	EXP 150 of 150	145.5153	0.0375	0.9808	EXP 150 of 150				
15D10060	4.9 %	0.390488	0.001582	0.6178	EXP 150 of 150	7.4872	0.0308	0.6784	EXP 150 of 150	0.408260	0.028489	0.0164	EXP 150 of 150	5.50564	0.02247	0.6914	EXP 150 of 150	158.2291	0.0418	0.9833	EXP 150 of 150				
15D10062	5.2 %	0.390414	0.001375	0.6930	EXP 150 of 150	8.2210	0.0301	0.7168	EXP 150 of 150	0.413470	0.028914	0.0071	EXP 150 of 150	5.84345	0.02477	0.6381	EXP 150 of 150	156.9225	0.0401	0.9855	EXP 150 of 150				
15D10063	5.5 %	0.307000	0.001171	0.6166	EXP 150 of 150	7.1615	0.0315	0.6588	EXP 150 of 150	0.360451	0.026840	0.0103	EXP 150 of 150	5.05280	0.02388	0.5817	EXP 150 of 150	124.3271	0.0401	0.9374	EXP 150 of 150				
15D10064	5.8 %	0.214784	0.001080	0.2651	EXP 150 of 150	5.1386	0.0296	0.5563	EXP 150 of 150	0.281934	0.028914	0.0106	EXP 150 of 150	3.84070	0.02617	0.3786	EXP 150 of 150	88.0543	0.0430	0.0518	EXP 150 of 150				
15D10066	6.1 %	0.202329	0.001087	0.2695	EXP 150 of 150	4.9033	0.0327	0.4514	EXP 150 of 150	0.265214	0.025133	0.0106	EXP 150 of 150	3.78512	0.02751	0.3340	EXP 150 of 150	84.3645	0.0414	0.0025	EXP 149 of 150				
15D10067	6.5 %	0.251000	0.001141	0.4132	EXP 150 of 150	5.7207	0.0326	0.5085	EXP 150 of 150	0.347084	0.026014	0.0046	EXP 150 of 150	4.43176	0.02365	0.4706	EXP 150 of 150	101.7550	0.0380	0.8412	EXP 149 of 150				
15D10068	7.0 %	0.256000	0.001182	0.3821	EXP 150 of 150	6.1009	0.0290	0.6311	EXP 149 of 150	0.374668	0.028306	0.0001	EXP 150 of 150	4.69842	0.02994	0.4170	EXP 150 of 150	105.5258	0.0370	0.8755	EXP 150 of 150				
15D10070	7.6 %	0.293504	0.001311	0.5928	EXP 149 of 150	7.3126	0.0280	0.6859	EXP 150 of 150	0.510089	0.026210	0.0003	EXP 150 of 150	5.68775	0.02810	0.5832	EXP 150 of 150	122.1677	0.0367	0.9643	EXP 150 of 150				
15D10071	8.4 %	0.355406	0.001375	0.6412	EXP 150 of 150	9.4122	0.0298	0.7492	EXP 150 of 150	0.727033	0.027725	0.0411	EXP 150 of 150	7.21005	0.02462	0.7663	EXP 150 of 150	151.4431	0.0372	0.9865	EXP 149 of 150				
15D10072	9.4 %	0.537777	0.001823	0.7337	EXP 150 of 150	15.9331	0.0305	0.8958	EXP 150 of 150	1.352858	0.025350	0.1541	EXP 150 of 150	11.09342	0.02911	0.8488	EXP 150 of 150	228.4424	0.0431	0.9957	EXP 150 of 150				
15D10074	10.5 %	0.597469	0.001794	0.7945	EXP 150 of 150	21.3253	0.0295	0.9469	EXP 149 of 150	1.674722	0.026636	0.1457	EXP 150 of 150	12.70905	0.02775	0.8926	EXP 150 of 150	267.3839	0.0484	0.9968	EXP 150 of 150				
15D10075	11.7 %	0.617781	0.001767	0.7977	EXP 150 of 150	25.1704	0.0312	0.9550	EXP 150 of 150	1.471315	0.026783	0.0771	EXP 150 of 150	12.45197	0.02493	0.9080	EXP 150 of 150	299.1184	0.0495	0.9976	EXP 150 of 150				
15D10076	13.1 %	0.794690	0.001991	0.8520	EXP 150 of 150	37.8572	0.0338	0.9757	EXP 150 of 150	1.479647	0.024109	0.1387	EXP 150 of 150	13.32818	0.02866	0.8872	EXP 150 of 150	437.8270	0.0536	0.9990	EXP 150 of 150				
15D10078	14.7 %	0.941078	0.002316	0.8669	EXP 150 of 150	48.9351	0.0319	0.9870	EXP 150 of 150	1.454106	0.025763	0.0848	EXP 150 of 150	13.40404	0.02391	0.9187	EXP 150 of 150	559.2681	0.0637	0.9992	EXP 150 of 150				
15D10079	16.5 %	1.388664	0.002790	0.9117	EXP 148 of 150	80.1300	0.0363	0.9936	EXP 150 of 150	1.924005	0.026563	0.2323	EXP 150 of 150	16.38240	0.02783	0.9227	EXP 150 of 150	934.6409	0.0725	0.9997	EXP 150 of 150				
15D10080	18.5 %	1.791598	0.003165	0.9349	EXP 150 of 150	106.2449	0.0364	0.9964	EXP 150 of 150	2.138459	0.025193	0.1054	EXP 150 of 150	18.83867	0.02784	0.9421	EXP 150 of 150	1296.7303	0.0829	0.9998	EXP 150 of 150				
15D10082	19.8 %	1.418771	0.002546	0.9237	EXP 150 of 150	82.0942	0.0346	0.9946	EXP 150 of 150	1.338561	0.028626	0.0736	EXP 150 of 150	13.73465	0.02650	0.8945	EXP 150 of 150	1110.6327	0.0777	0.9998	EXP 150 of 150				
15D10083	21.7 %	1.282166	0.002403	0.9189	EXP 150 of 150	74.2628	0.0341	0.9936	EXP 150 of 150	1.060509	0.027711	0.0152	EXP 150 of 150	12.32298	0.02579	0.8804	EXP 150 of 150	1029.9619	0.0816	0.9997	EXP 150 of 150				
15D10084	22.8 %	0.666468	0.002071	0.7780	EXP 150 of 150	35.3052	0.0345	0.9715	EXP 150 of 150	0.542809	0.025726	0.0123	EXP 150 of 150	6.57516	0.02600	0.6439	EXP 150 of 150	524.9818	0.0599	0.9992	EXP 150 of 150				
15D10086	24.3 %	0.444212	0.001437	0.7516	EXP 150 of 150	21.8015	0.0313	0.9383	EXP 150 of 150	0.301243	0.027497	0.0021	EXP 150 of 150	4.28659	0.02486	0.4369	EXP 150 of 150	345.1087	0.0466	0.9986	EXP 150 of 150				



OSU Argon Geochronology Lab																																		
Sample Parameters		Sample	Material	Location	Analyst	Temp	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	Irradiation	X-pos	Y-pos	Z/H-pos				
15D10046	2.0 %	274-3	Groundmass	Kerguelen Plateau	Dan Miggins	2	FCT-NM (7B23-14)	28.201	0.082	Kuiper et al (2008)	8.86043	0.116	0.00177389	0.116	303.404	0.116	0.993478814	0.065	1	4.8E-14	31	MAR	2015	19	22	1	14-OSU-07	0.00	0.00	32.21				
15D10048	2.2 %	274-3	Groundmass	Kerguelen Plateau	Dan Miggins	2.2	FCT-NM (7B23-14)	28.201	0.082	Kuiper et al (2008)	8.86043	0.116	0.00177389	0.116	303.404	0.116	0.993478814	0.065	1	4.8E-14	31	MAR	2015	19	49	1	14-OSU-07	0.00	0.00	32.21				
15D10049	2.4 %	274-3	Groundmass	Kerguelen Plateau	Dan Miggins	2.4	FCT-NM (7B23-14)	28.201	0.082	Kuiper et al (2008)	8.86043	0.116	0.00177389	0.116	303.404	0.116	0.993478814	0.065	1	4.8E-14	31	MAR	2015	20	4	1	14-OSU-07	0.00	0.00	32.21				
15D10050	2.6 %	274-3	Groundmass	Kerguelen Plateau	Dan Miggins	2.6	FCT-NM (7B23-14)	28.201	0.082	Kuiper et al (2008)	8.86043	0.116	0.00177389	0.116	303.404	0.116	0.993478814	0.065	1	4.8E-14	31	MAR	2015	20	18	1	14-OSU-07	0.00	0.00	32.21				
15D10052	2.8 %	274-3	Groundmass	Kerguelen Plateau	Dan Miggins	2.8	FCT-NM (7B23-14)	28.201	0.082	Kuiper et al (2008)	8.86043	0.116	0.00177389	0.116	303.404	0.116	0.993478814	0.065	1	4.8E-14	31	MAR	2015	20	45	1	14-OSU-07	0.00	0.00	32.21				
15D10053	3.0 %	274-3	Groundmass	Kerguelen Plateau	Dan Miggins	3	FCT-NM (7B23-14)	28.201	0.082	Kuiper et al (2008)	8.86043	0.116	0.00177389	0.116	303.404	0.116	0.993478814	0.065	1	4.8E-14	31	MAR	2015	20	59	1	14-OSU-07	0.00	0.00	32.21				
15D10054	3.3 %	274-3	Groundmass	Kerguelen Plateau	Dan Miggins	3.3	FCT-NM (7B23-14)	28.201	0.082	Kuiper et al (2008)	8.86043	0.116	0.00177389	0.116	303.404	0.116	0.993478814	0.065	1	4.8E-14	31	MAR	2015	21	13	1	14-OSU-07	0.00	0.00	32.21				
15D10055	3.6 %	274-3	Groundmass	Kerguelen Plateau	Dan Miggins	3.6	FCT-NM (7B23-14)	28.201	0.082	Kuiper et al (2008)	8.86043	0.116	0.00177389	0.116	303.404	0.116	0.993478814	0.065	1	4.8E-14	31	MAR	2015	21	26	1	14-OSU-07	0.00	0.00	32.21				
15D10057	3.9 %	274-3	Groundmass	Kerguelen Plateau	Dan Miggins	3.9	FCT-NM (7B23-14)	28.201	0.082	Kuiper et al (2008)	8.86043	0.116	0.00177389	0.116	303.404	0.116	0.993478814	0.065	1	4.8E-14	31	MAR	2015	21	52	1	14-OSU-07	0.00	0.00	32.21				
15D10058	4.3 %	274-3	Groundmass	Kerguelen Plateau	Dan Miggins	4.3	FCT-NM (7B23-14)	28.201	0.082	Kuiper et al (2008)	8.86043	0.116	0.00177389	0.116	303.404	0.116	0.993478814	0.065	1	4.8E-14	31	MAR	2015	22	6	1	14-OSU-07	0.00	0.00	32.21				
15D10059	4.6 %	274-3	Groundmass	Kerguelen Plateau	Dan Miggins	4.6	FCT-NM (7B23-14)	28.201	0.082	Kuiper et al (2008)	8.86043	0.116	0.00177389	0.116	303.404	0.116	0.993478814	0.065	1	4.8E-14	31	MAR	2015	22	18	1	14-OSU-07	0.00	0.00	32.21				
15D10060	4.9 %	274-3	Groundmass	Kerguelen Plateau	Dan Miggins	4.9	FCT-NM (7B23-14)	28.201	0.082	Kuiper et al (2008)	8.86043	0.116	0.00177389	0.116	303.404	0.116	0.993478814	0.065	1	4.8E-14	31	MAR	2015	22	31	1	14-OSU-07	0.00	0.00	32.21				
15D10062	5.2 %	274-3	Groundmass	Kerguelen Plateau	Dan Miggins	5.2	FCT-NM (7B23-14)	28.201	0.082	Kuiper et al (2008)	8.86043	0.116	0.00177389	0.116	303.404	0.116	0.993478814	0.065	1	4.8E-14	31	MAR	2015	22	56	1	14-OSU-07	0.00	0.00	32.21				
15D10063	5.5 %	274-3	Groundmass	Kerguelen Plateau	Dan Miggins	5.5	FCT-NM (7B23-14)	28.201	0.082	Kuiper et al (2008)	8.86043	0.116	0.00177389	0.116	303.404	0.116	0.993478814	0.065	1	4.8E-14	31	MAR	2015	23	8	1	14-OSU-07	0.00	0.00	32.21				
15D10064	5.8 %	274-3	Groundmass	Kerguelen Plateau	Dan Miggins	5.8	FCT-NM (7B23-14)	28.201	0.082	Kuiper et al (2008)	8.86043	0.116	0.00177389	0.116	303.404	0.116	0.993478814	0.065	1	4.8E-14	31	MAR	2015	23	20	1	14-OSU-07	0.00	0.00	32.21				
15D10066	6.1 %	274-3	Groundmass	Kerguelen Plateau	Dan Miggins	6.1	FCT-NM (7B23-14)	28.201	0.082	Kuiper et al (2008)	8.86043	0.116	0.00177389	0.116	303.404	0.116	0.993478814	0.065	1	4.8E-14	31	MAR	2015	23	45	1	14-OSU-07	0.00	0.00	32.21				
15D10067	6.5 %	274-3	Groundmass	Kerguelen Plateau	Dan Miggins	6.5	FCT-NM (7B23-14)	28.201	0.082	Kuiper et al (2008)	8.86043	0.116	0.00177389	0.116	303.404	0.116	0.993478814	0.065	1	4.8E-14	31	MAR	2015	23	58	1	14-OSU-07	0.00	0.00	32.21				
15D10068	7.0 %	274-3	Groundmass	Kerguelen Plateau	Dan Miggins	7	FCT-NM (7B23-14)	28.201	0.082	Kuiper et al (2008)	8.86043	0.116	0.00177389	0.116	303.404	0.116	0.993478814	0.065	1	4.8E-14	1	APR	2015	0	10	1	14-OSU-07	0.00	0.00	32.21				
15D10070	7.6 %	274-3	Groundmass	Kerguelen Plateau	Dan Miggins	7.6	FCT-NM (7B23-14)	28.201	0.082	Kuiper et al (2008)	8.86043	0.116	0.00177389	0.116	303.404	0.116	0.993478814	0.065	1	4.8E-14	1	APR	2015	0	35	1	14-OSU-07	0.00	0.00	32.21				
15D10071	8.4 %	274-3	Groundmass	Kerguelen Plateau	Dan Miggins	8.4	FCT-NM (7B23-14)	28.201	0.082	Kuiper et al (2008)	8.86043	0.116	0.00177389	0.116	303.404	0.116	0.993478814	0.065	1	4.8E-14	1	APR	2015	0	48	1	14-OSU-07	0.00	0.00	32.21				
15D10072	9.4 %	274-3	Groundmass	Kerguelen Plateau	Dan Miggins	9.4	FCT-NM (7B23-14)	28.201	0.082	Kuiper et al (2008)	8.86043	0.116	0.00177389	0.116	303.404	0.116	0.993478814	0.065	1	4.8E-14	1	APR	2015	1	0	1	14-OSU-07	0.00	0.00	32.21				
15D10074	10.5 %	274-3	Groundmass	Kerguelen Plateau	Dan Miggins	10.5	FCT-NM (7B23-14)	28.201	0.082	Kuiper et al (2008)	8.86043	0.116	0.00177389	0.116	303.404	0.116	0.993478814	0.065	1	4.8E-14	1	APR	2015	1	25	1	14-OSU-07	0.00	0.00	32.21				
15D10075	11.7 %	274-3	Groundmass	Kerguelen Plateau	Dan Miggins	11.7	FCT-NM (7B23-14)	28.201	0.082	Kuiper et al (2008)	8.86043	0.116	0.00177389	0.116	303.404	0.116	0.993478814	0.065	1	4.8E-14	1	APR	2015	1	38	1	14-OSU-07	0.00	0.00	32.21				
15D10076	13.1 %	274-3	Groundmass	Kerguelen Plateau	Dan Miggins	13.1	FCT-NM (7B23-14)	28.201	0.082	Kuiper et al (2008)	8.86043	0.116	0.00177389	0.116	303.404	0.116	0.993478814	0.065	1	4.8E-14	1	APR	2015	1	50	1	14-OSU-07	0.00	0.00	32.21				
15D10078	14.7 %	274-3	Groundmass	Kerguelen Plateau	Dan Miggins	14.7	FCT-NM (7B23-14)	28.201	0.082	Kuiper et al (2008)	8.86043	0.116	0.00177389	0.116	303.404	0.116	0.993478814	0.065	1	4.8E-14	1	APR	2015	2	15	1	14-OSU-07	0.00	0.00	32.21				
15D10079	16.5 %	274-3	Groundmass	Kerguelen Plateau	Dan Miggins	16.5	FCT-NM (7B23-14)	28.201	0.082	Kuiper et al (2008)	8.86043	0.116	0.00177389	0.116	303.404	0.116	0.993478814	0.065	1	4.8E-14	1	APR	2015	2	28	1	14-OSU-07	0.00	0.00	32.21				
15D10080	18.5 %	274-3	Groundmass	Kerguelen Plateau	Dan Miggins	18.5	FCT-NM (7B23-14)	28.201	0.082	Kuiper et al (2008)	8.86043	0.116	0.00177389	0.116	303.404	0.116	0.993478814	0.065	1	4.8E-14	1	APR	2015	2	41	1	14-OSU-07	0.00	0.00	32.21				
15D10082	19.8 %	274-3	Groundmass	Kerguelen Plateau	Dan Miggins	19.8	FCT-NM (7B23-14)	28.201	0.082	Kuiper et al (2008)	8.86043	0.116	0.00177389	0.116	303.404	0.116	0.993478814	0.065	1	4.8E-14	1	APR	2015	3	6	1	14-OSU-07	0.00	0.00	32.21				
15D10083	21.7 %	274-3	Groundmass	Kerguelen Plateau	Dan Miggins	21.7	FCT-NM (7B23-14)	28.201	0.082	Kuiper et al (2008)	8.86043	0.116	0.00177389	0.116	303.404	0.116	0.993478814	0.065	1	4.8E-14	1	APR	2015	3	19	1	14-OSU-07	0.00	0.00	32.21				
15D10084	22.8 %	274-3	Groundmass	Kerguelen Plateau	Dan Miggins	22.8	FCT-NM (7B23-14)	28.201	0.082	Kuiper et al (2008)	8.86043	0.116	0.00177389	0.116	303.404	0.116	0.993478814	0.065	1	4.8E-14	1	APR	2015	3	32	1	14-OSU-07	0.00	0.00	32.21				
15D10086	24.3 %	274-3	Groundmass	Kerguelen Plateau	Dan Miggins	24.3	FCT-NM (7B23-14)	28.201	0.082	Kuiper et al (2008)	8.86043	0.116	0.00177389	0.116	303.404	0.116	0.993478814	0.065	1	4.8E-14	1	APR	2015	3	58	1	14-OSU-07	0.00	0.00	32.21				



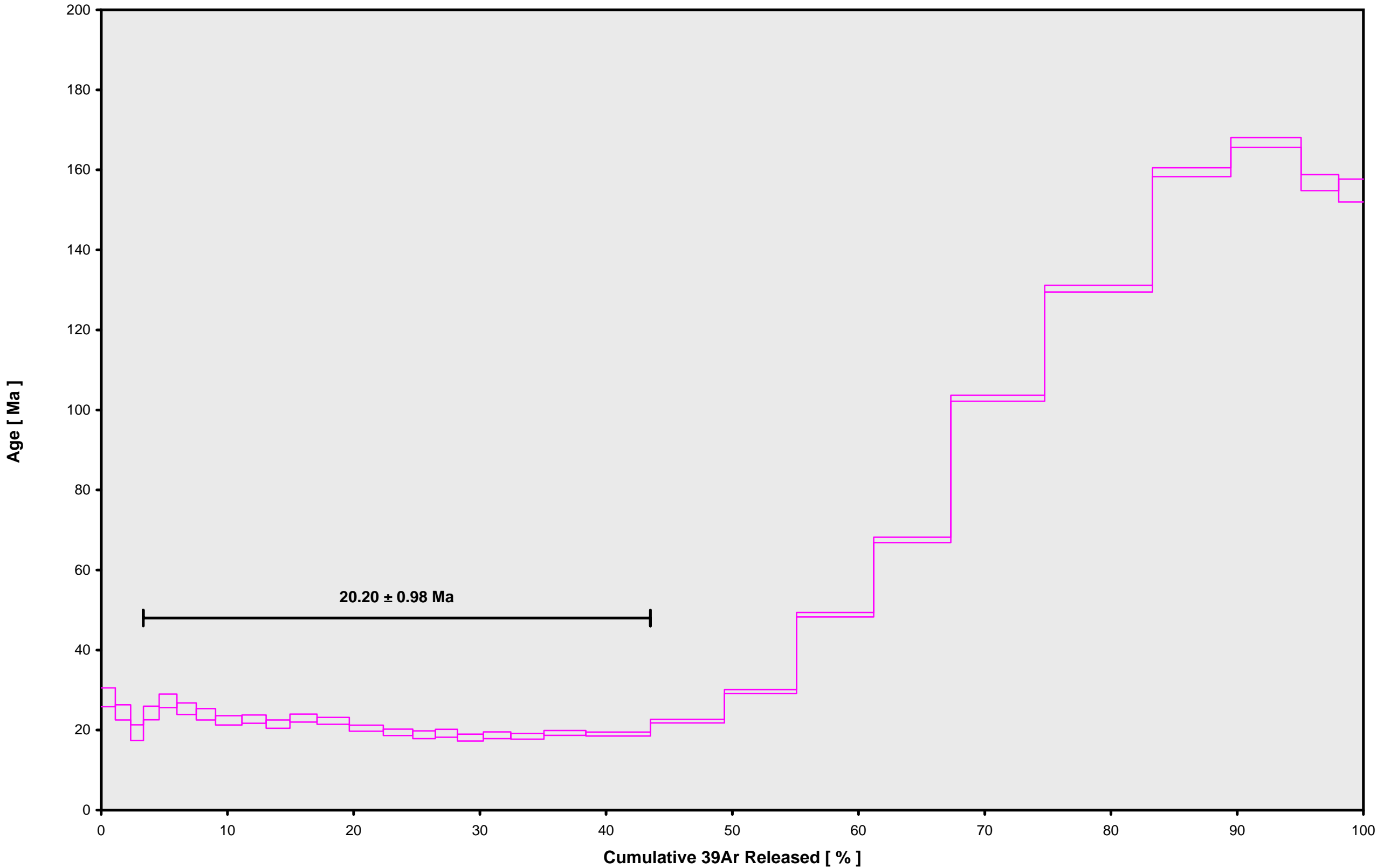
[illegible]



OSU Argon Geochronology Lab																											
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	
15D10046	2.0 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D10048	2.2 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D10049	2.4 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D10050	2.6 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D10052	2.8 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D10053	3.0 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D10054	3.3 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D10055	3.6 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D10057	3.9 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D10058	4.3 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D10059	4.6 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D10060	4.9 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D10062	5.2 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D10063	5.5 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D10064	5.8 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D10066	6.1 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D10067	6.5 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D10068	7.0 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D10070	7.6 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D10071	8.4 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D10072	9.4 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D10074	10.5 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D10075	11.7 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D10076	13.1 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D10078	14.7 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D10079	16.5 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D10080	18.5 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D10082	19.8 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D10083	21.7 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D10084	22.8 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D10086	24.3 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0



15D10045.AGE >>> 274-3 >>> KERGUELEN | FALLOON (14-PIL-01) PROJECT



Ar-Ages in Ma

WEIGHTED PLATEAU

20.20 ± 0.98

TOTAL FUSION

65.80 ± 0.24

NORMAL ISOCHRON

15.02 ± 1.38

INVERSE ISOCHRON

14.99 ± 1.36

MSWD (PROBABILITY)

22.80 (0%)

Sample Info

Groundmass

Kerguelen Plateau

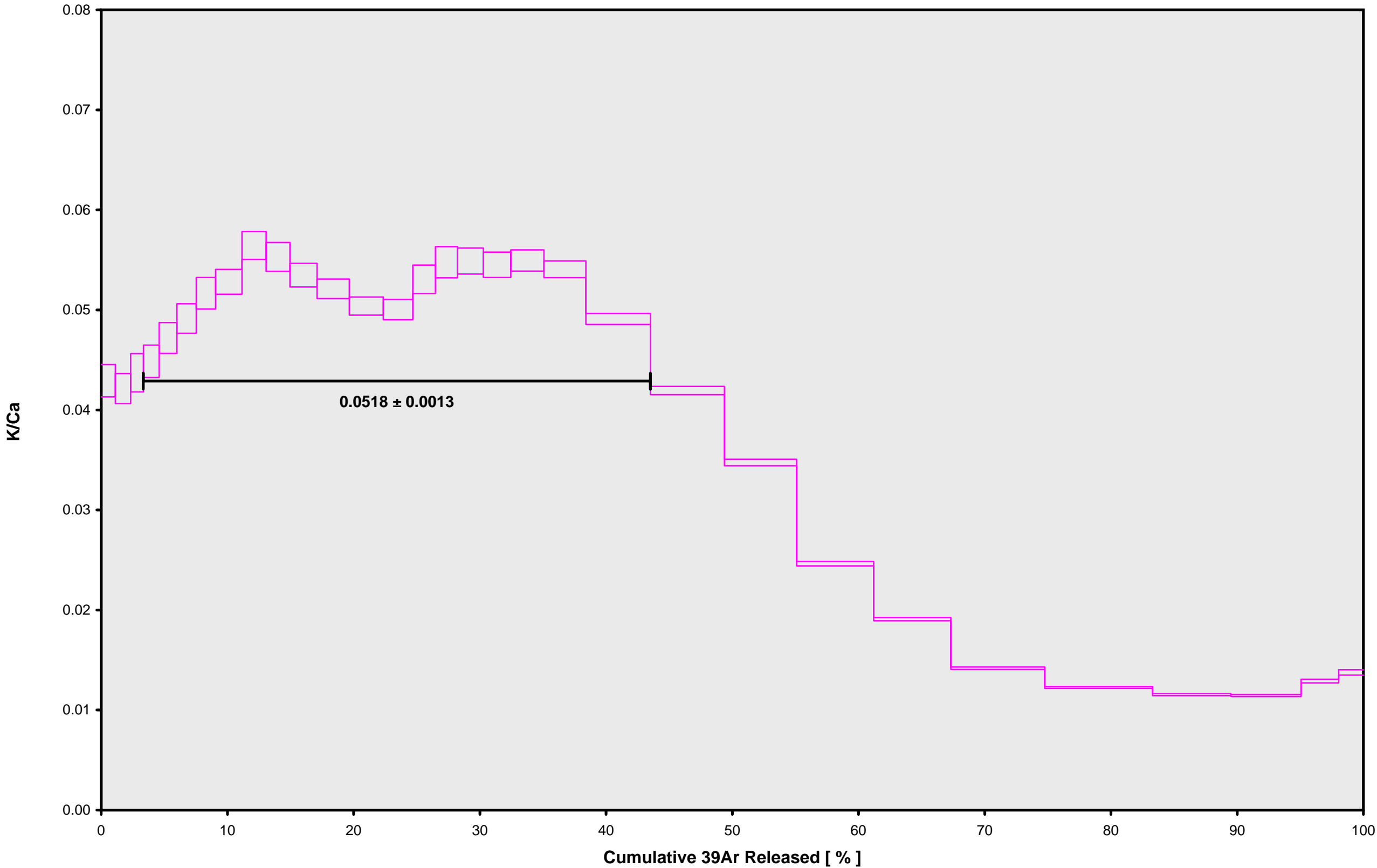
Dan Miggins

IRR = 14-OSU-07 (7B23-14)

J = 0.00177389 ± 0.00000206



15D10045.AGE >>> 274-3 >>> KERGUELEN | FALLOON (14-PIL-01) PROJECT



**Ar-Ages in Ma**

**WEIGHTED PLATEAU**

**20.20 ± 0.98**

**TOTAL FUSION**

**65.80 ± 0.24**

**NORMAL ISOCHRON**

**15.02 ± 1.38**

**INVERSE ISOCHRON**

**14.99 ± 1.36**

**Sample Info**

**Groundmass**

**Kerguelen Plateau**

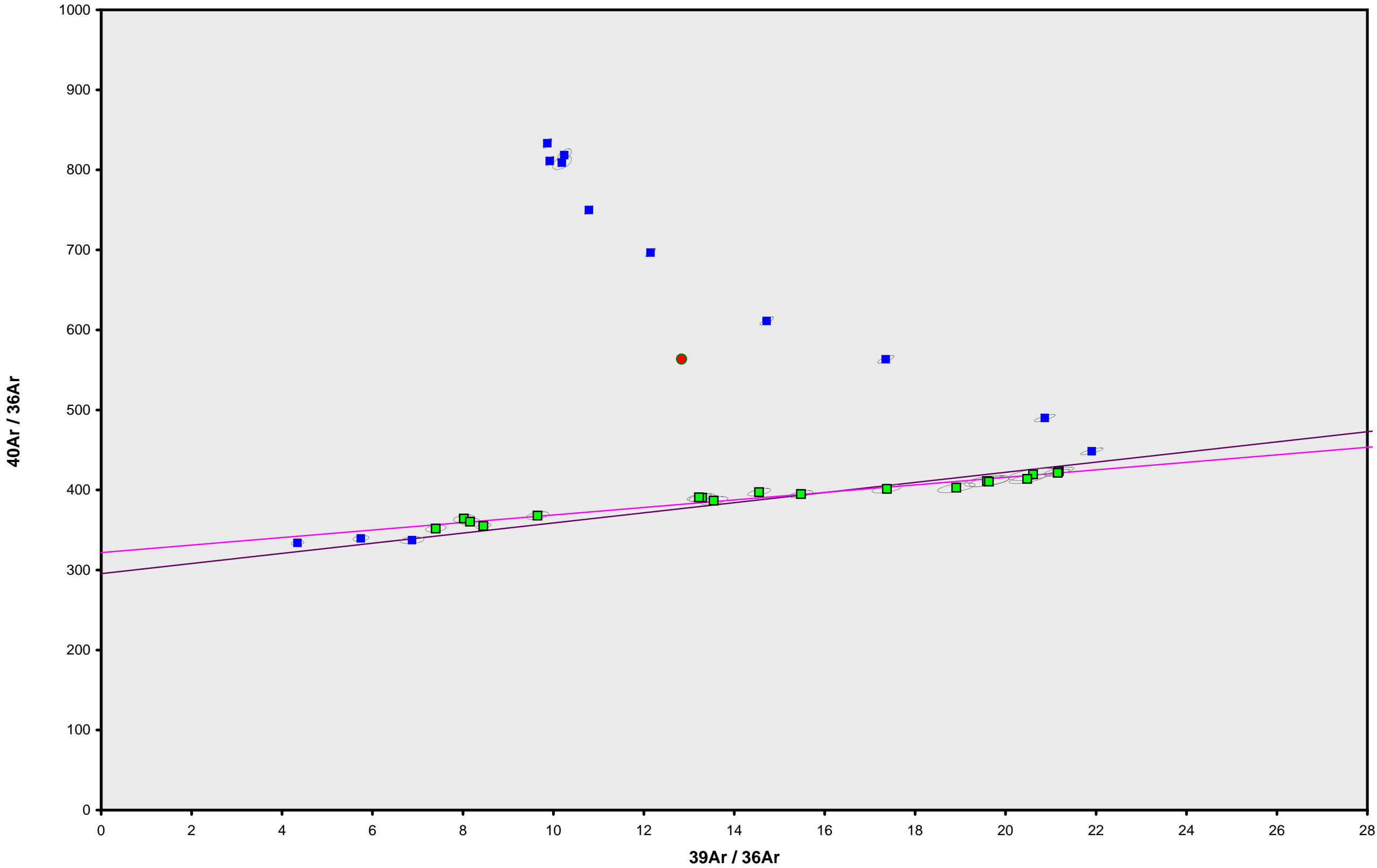
**Dan Miggins**

**IRR = 14-OSU-07 (7B23-14)**

**J = 0.00177389 ± 0.00000206**



15D10045.AGE >>> 274-3 >>> KERGUELEN | FALLOON (14-PIL-01) PROJECT



Ar-Ages in Ma

WEIGHTED PLATEAU

20.20 ± 0.98

TOTAL FUSION

65.80 ± 0.24

NORMAL ISOCHRON

15.02 ± 1.38

INVERSE ISOCHRON

14.99 ± 1.36

MSWD (PROBABILITY)

4.69 (0%)

40AR/36AR INTERCEPT

321.7 ± 6.6

Sample Info

Groundmass

Kerguelen Plateau

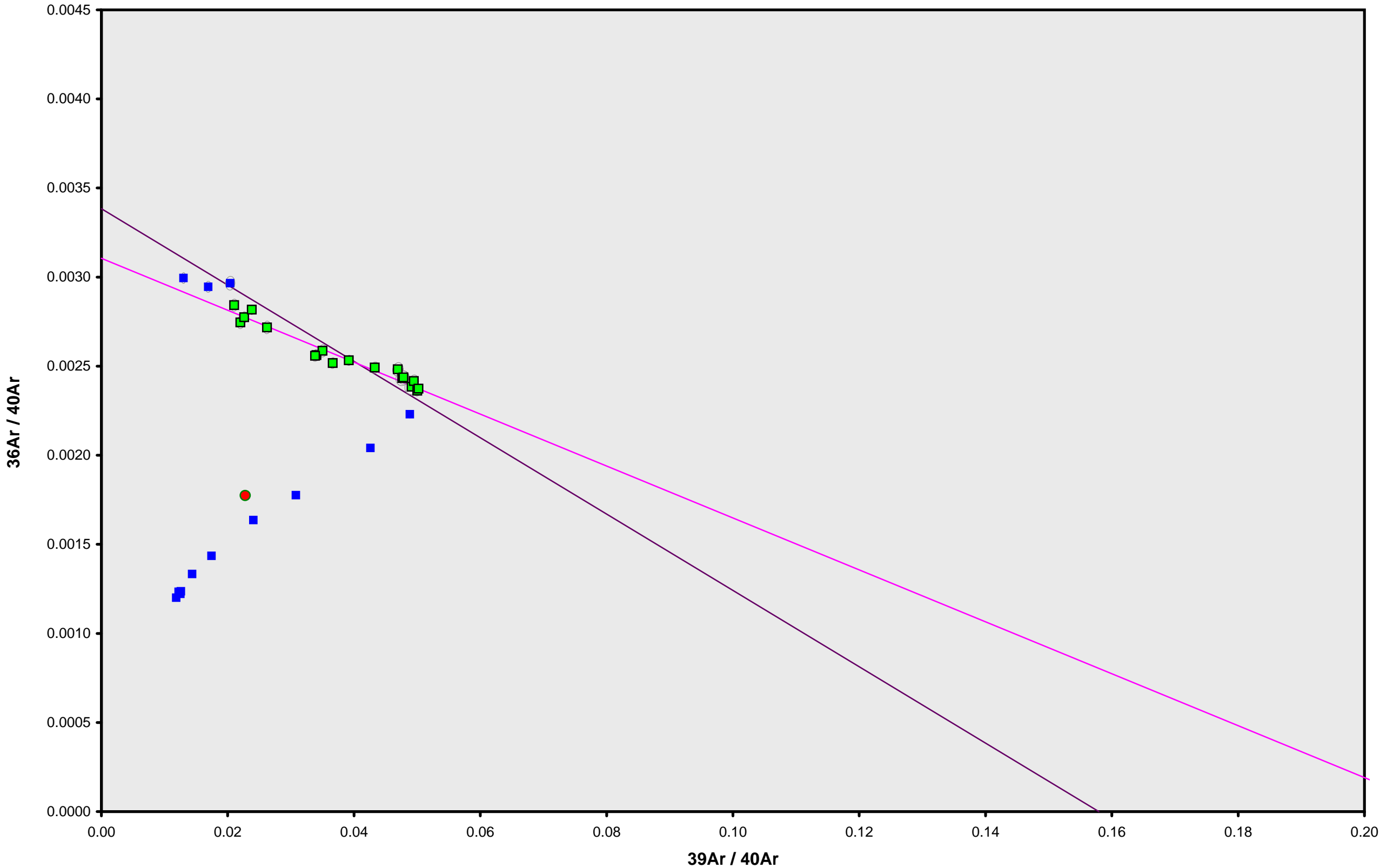
Dan Miggins

IRR = 14-OSU-07 (7B23-14)

J = 0.00177389 ± 0.00000206



15D10045.AGE >>> 274-3 >>> KERGUELEN | FALLOON (14-PIL-01) PROJECT



Ar-Ages in Ma

WEIGHTED PLATEAU

20.20 ± 0.98

TOTAL FUSION

65.80 ± 0.24

NORMAL ISOCHRON

15.02 ± 1.38

INVERSE ISOCHRON

14.99 ± 1.36

MSWD (PROBABILITY)

4.69 (0%)

SPREADING FACTOR

13.7%

40AR/36AR INTERCEPT

322.0 ± 6.6

Sample Info

Groundmass

Kerguelen Plateau

Dan Miggins

IRR = 14-OSU-07 (7B23-14)

J = 0.00177389 ± 0.00000206



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
15D07375	1.9 %	0.569381	4.5687	0.0148227	27.8628	23.1999	2.71 ± 0.18	12.12	0.49	2.62 ± 0.17
15D07376	2.0 %	0.539215	5.2802	0.0447638	30.6859	25.2081	2.67 ± 0.16	13.66	0.54	2.50 ± 0.15
15D07378	2.1 %	0.468473	5.1810	0.0814797	29.0585	24.5203	2.74 ± 0.15	15.04	0.51	2.41 ± 0.15
15D07379	2.2 %	0.450192	5.2817	0.0000000	30.5740	23.5451	2.50 ± 0.14	15.03	0.54	2.49 ± 0.15
15D07380	2.3 %	0.371790	4.6316	0.0072745	27.3748	22.0316	2.62 ± 0.13	16.70	0.48	2.54 ± 0.17
15D07382	2.4 %	0.402416	6.1183	0.0570307	33.1492	27.2168	2.67 ± 0.12	18.62	0.59	2.33 ± 0.12
15D07383	2.5 %	0.370152	5.9634	0.0169925	32.7222	25.1339	2.50 ± 0.11	18.68	0.58	2.36 ± 0.12
15D07384	2.6 %	0.367599	6.3452	0.0000000	35.2766	27.0414	2.49 ± 0.11	19.93	0.62	2.39 ± 0.12
15D07387	2.7 %	✓ 0.334428	5.8717	0.0463042	33.0670	26.5359	2.61 ± 0.10	21.16	0.58	2.42 ± 0.13
15D07388	2.8 %	✓ 0.329237	6.8328	0.0250239	37.7420	30.1673	2.60 ± 0.09	23.66	0.67	2.38 ± 0.12
15D07389	2.9 %	✓ 0.278164	6.4645	0.0000000	35.6093	28.6204	2.61 ± 0.09	25.82	0.63	2.37 ± 0.11
15D07391	3.0 %	✓ 0.283758	7.4424	0.1067426	40.7316	32.4408	2.59 ± 0.08	27.89	0.72	2.35 ± 0.10
15D07392	3.2 %	✓ 0.268579	7.8320	0.0275272	43.6424	34.5772	2.58 ± 0.08	30.33	0.77	2.40 ± 0.11
15D07393	3.4 %	✓ 0.251439	7.9783	0.0124581	44.6272	35.3232	2.57 ± 0.06	32.21	0.79	2.41 ± 0.10
15D07395	3.6 %	✓ 0.282284	10.2648	0.0000000	57.7583	45.8432	2.58 ± 0.06	35.45	1.02	2.42 ± 0.08
15D07396	3.8 %	✓ 0.211927	8.6375	0.0278678	49.9721	39.7615	2.59 ± 0.06	38.82	0.88	2.49 ± 0.09
15D07397	4.0 %	✓ 0.161004	6.5731	0.0236674	39.2430	31.2686	2.59 ± 0.06	39.64	0.69	2.57 ± 0.12
15D07399	4.3 %	✓ 0.165854	8.1720	0.0241834	48.3735	39.1819	2.63 ± 0.05	44.40	0.85	2.55 ± 0.10
15D07400	4.6 %	✓ 0.324624	17.7789	0.0253270	103.4171	83.3173	2.62 ± 0.04	46.46	1.83	2.50 ± 0.05
15D07401	4.9 %	✓ 0.178900	13.7479	0.0885415	84.0349	67.4478	2.61 ± 0.03	56.02	1.49	2.63 ± 0.06
15D07403	5.2 %	✓ 0.246644	20.5462	0.0505887	122.7648	99.1911	2.63 ± 0.02	57.60	2.17	2.57 ± 0.04
15D07404	5.5 %	✓ 0.184677	25.1976	0.0878700	152.3184	122.7756	2.62 ± 0.02	69.17	2.69	2.60 ± 0.04
15D07405	5.8 %	✓ 0.094751	15.1159	0.0380311	100.2535	80.3807	2.61 ± 0.02	74.10	1.77	2.85 ± 0.06
15D07407	6.1 %	✓ 0.238205	27.9126	0.1062896	170.4594	137.1230	2.62 ± 0.02	66.02	3.01	2.63 ± 0.03
15D07408	6.5 %	✓ 0.189764	39.6332	0.1888074	242.9967	194.6459	2.61 ± 0.01	77.56	4.29	2.64 ± 0.03
15D07409	7.0 %	✓ 0.143649	32.3451	0.1737817	200.7361	159.6273	2.59 ± 0.01	78.91	3.55	2.67 ± 0.03
15D07411	7.6 %	✓ 0.149094	34.5698	0.1408306	214.6134	171.4902	2.60 ± 0.01	79.48	3.79	2.67 ± 0.03
15D07412	8.4 %	✓ 0.205393	47.4235	0.2041188	292.7306	233.7374	2.60 ± 0.01	79.31	5.17	2.65 ± 0.02
15D07413	9.4 %	✓ 0.333961	60.5693	0.2932286	356.6742	282.8843	2.58 ± 0.01	74.07	6.30	2.53 ± 0.02
15D07415	10.5 %	✓ 0.402556	62.0557	0.2675293	334.3119	266.3670	2.59 ± 0.01	69.07	5.91	2.32 ± 0.02
15D07416	11.7 %	✓ 0.455986	61.5533	0.1864417	288.5370	228.0323	2.57 ± 0.02	62.81	5.10	2.02 ± 0.02
15D07417	13.1 %	✓ 0.973037	108.2218	0.3444377	386.3902	304.7296	2.56 ± 0.02	51.42	6.83	1.54 ± 0.01
15D07419	14.7 %	✓ 1.484601	173.2133	0.5090766	434.0633	345.9032	2.59 ± 0.03	44.06	7.67	1.08 ± 0.01
15D07420	16.5 %	✓ 1.907194	271.2484	0.4921575	474.2355	374.5252	2.57 ± 0.03	39.90	8.38	0.75 ± 0.00
15D07421	17.7 %	✓ 1.440368	187.6240	0.2713431	323.1370	257.8432	2.60 ± 0.03	37.71	5.71	0.74 ± 0.00
15D07423	18.5 %	1.042415	100.2624	0.1989469	211.6648	165.6618	2.55 ± 0.04	34.96	3.74	0.91 ± 0.01
15D07424	19.5 %	0.752648	67.5539	0.0825564	143.3196	111.9611	2.54 ± 0.04	33.47	2.53	0.91 ± 0.01
15D07425	20.5 %	0.598762	61.0807	0.0759276	116.1329	91.2665	2.56 ± 0.05	34.01	2.05	0.82 ± 0.01
15D07427	21.7 %	0.574982	76.0364	0.1060436	117.0730	91.0798	2.53 ± 0.04	34.88	2.07	0.66 ± 0.01
15D07428	22.8 %	0.533952	79.4419	0.1046388	111.3177	88.9424	2.60 ± 0.05	36.03	1.97	0.60 ± 0.00

Σ	18.562053	1702.5708	4.5526523	5658.6523	4500.5498					
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Information on Analysis	Results	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD	39Ar(k) (%,n)	K/Ca ± 2σ
Sample = 1180050-1A Material = Groundmass Location = Kerguelen Plateau Analyst = Dan Miggins Project = KERGUELEN   FALLOON (14- Mass Discrimination Law = LIN Irradiation = 14-OSU-07 (7B19-14) J = 0.00179979 ± 0.00000211 FCT-NM = 28.201 ± 0.023 Ma	Age Plateau Error Mean	0.79774 ± 0.00187 ± 0.23%	2.59 ± 0.01 ± 0.33%	2.67 0%	83.28 27	1.07 ± 0.23
			Full External Error ± 0.06 Analytical Error ± 0.01	1.55 1.6328	2σ Confidence Limit Error Magnification	
	Total Fusion Age	0.79534 ± 0.00174 ± 0.22%	2.59 ± 0.01 ± 0.32%		40	1.43 ± 0.00
			Full External Error ± 0.06 Analytical Error ± 0.01			



Normal Isochron		39(k)/36(a) ± 2σ		40(a+r)/36(a) ± 2σ	r.i.
15D07375	1.9 %		48.94 ± 0.47	336.25 ± 3.11	0.9440
15D07376	2.0 %		56.91 ± 0.56	342.25 ± 3.23	0.9489
15D07378	2.1 %		62.03 ± 0.62	347.84 ± 3.34	0.9457
15D07379	2.2 %		67.91 ± 0.67	347.80 ± 3.31	0.9475
15D07380	2.3 %		73.63 ± 0.74	354.76 ± 3.45	0.9415
15D07382	2.4 %		82.38 ± 0.87	363.13 ± 3.74	0.9555
15D07383	2.5 %		88.40 ± 0.94	363.40 ± 3.79	0.9553
15D07384	2.6 %		95.97 ± 1.10	369.06 ± 4.17	0.9662
15D07387	2.7 %	✓	98.88 ± 1.07	374.85 ± 4.00	0.9582
15D07388	2.8 %	✓	114.63 ± 1.26	387.13 ± 4.19	0.9637
15D07389	2.9 %	✓	128.02 ± 1.53	398.39 ± 4.71	0.9647
15D07391	3.0 %	✓	143.54 ± 1.68	409.83 ± 4.75	0.9680
15D07392	3.2 %	✓	162.49 ± 2.10	424.24 ± 5.45	0.9738
15D07393	3.4 %	✓	177.49 ± 2.10	435.98 ± 5.12	0.9692
15D07395	3.6 %	✓	204.61 ± 2.37	457.90 ± 5.27	0.9749
15D07396	3.8 %	✓	235.80 ± 3.21	483.12 ± 6.58	0.9767
15D07397	4.0 %	✓	243.74 ± 3.69	489.71 ± 7.41	0.9712
15D07399	4.3 %	✓	291.66 ± 4.30	531.74 ± 7.85	0.9760
15D07400	4.6 %	✓	318.57 ± 3.71	552.16 ± 6.39	0.9844
15D07401	4.9 %	✓	469.73 ± 6.88	672.52 ± 9.85	0.9859
15D07403	5.2 %	✓	497.74 ± 5.80	697.66 ± 8.10	0.9850
15D07404	5.5 %	✓	824.78 ± 11.48	960.31 ± 13.32	0.9899
15D07405	5.8 %	✓	1058.07 ± 21.60	1143.83 ± 23.37	0.9922
15D07407	6.1 %	✓	715.60 ± 8.97	871.15 ± 10.87	0.9889
15D07408	6.5 %	✓	1280.52 ± 18.32	1321.23 ± 18.83	0.9926
15D07409	7.0 %	✓	1397.41 ± 23.39	1406.73 ± 23.50	0.9938
15D07411	7.6 %	✓	1439.45 ± 22.19	1445.72 ± 22.23	0.9931
15D07412	8.4 %	✓	1425.22 ± 19.71	1433.50 ± 19.74	0.9927
15D07413	9.4 %	✓	1068.01 ± 11.27	1142.56 ± 11.95	0.9883
15D07415	10.5 %	✓	830.47 ± 8.47	957.19 ± 9.68	0.9874
15D07416	11.7 %	✓	632.78 ± 6.03	795.59 ± 7.50	0.9852
15D07417	13.1 %	✓	397.10 ± 3.31	608.67 ± 4.99	0.9826
15D07419	14.7 %	✓	292.38 ± 2.28	528.49 ± 4.04	0.9808
15D07420	16.5 %	✓	248.66 ± 1.83	491.88 ± 3.55	0.9786
15D07421	17.7 %	✓	224.34 ± 1.71	474.51 ± 3.54	0.9792
15D07423	18.5 %		203.05 ± 1.66	454.42 ± 3.64	0.9800
15D07424	19.5 %		190.42 ± 1.66	444.26 ± 3.83	0.9797
15D07425	20.5 %		193.96 ± 1.80	447.93 ± 4.11	0.9798
15D07427	21.7 %		203.61 ± 1.87	453.90 ± 4.12	0.9795
15D07428	22.8 %		208.48 ± 2.04	462.07 ± 4.48	0.9804

Results	40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD
Normal Isochron	295.09 ± 1.70	0.79818 ± 0.00299	2.60 ± 0.01	2.74
Error Chron	± 0.58%	± 0.37%	± 0.44%	0%
			Full External Error ± 0.06	
			Analytical Error ± 0.01	
Statistics	2σ Confidence Limit	1.57	Convergence	0.000007472144
	Error Magnification	1.6556	Number of Iterations	18
	Number of Data Points	27	Calculated Line	Weighted York-2



Inverse Isochron		39(k)/40(a+r) ± 2σ		36(a)/40(a+r) ± 2σ	r.i.
15D07375	1.9 %	0.1455340 ± 0.0004635		0.00297401 ± 0.00002747	0.0420
15D07376	2.0 %	0.1662778 ± 0.0005144		0.00292184 ± 0.00002757	0.0466
15D07378	2.1 %	0.1783231 ± 0.0005787		0.00287488 ± 0.00002762	0.0549
15D07379	2.2 %	0.1952653 ± 0.0006152		0.00287521 ± 0.00002735	0.0612
15D07380	2.3 %	0.2075493 ± 0.0007044		0.00281882 ± 0.00002739	0.0776
15D07382	2.4 %	0.2268463 ± 0.0007087		0.00275381 ± 0.00002837	0.0643
15D07383	2.5 %	0.2432627 ± 0.0007697		0.00275178 ± 0.00002869	0.0733
15D07384	2.6 %	0.2600240 ± 0.0007718		0.00270957 ± 0.00003063	0.0693
15D07387	2.7 % ✓	0.2637780 ± 0.0008233		0.00266775 ± 0.00002849	0.0857
15D07388	2.8 % ✓	0.2961161 ± 0.0008714		0.00258313 ± 0.00002799	0.0847
15D07389	2.9 % ✓	0.3213317 ± 0.0010161		0.00251010 ± 0.00002967	0.0937
15D07391	3.0 % ✓	0.3502552 ± 0.0010323		0.00244006 ± 0.00002828	0.0958
15D07392	3.2 % ✓	0.3830223 ± 0.0011297		0.00235715 ± 0.00003026	0.0918
15D07393	3.4 % ✓	0.4070958 ± 0.0011905		0.00229366 ± 0.00002696	0.1052
15D07395	3.6 % ✓	0.4468443 ± 0.0011555		0.00218388 ± 0.00002514	0.0868
15D07396	3.8 % ✓	0.4880748 ± 0.0014364		0.00206988 ± 0.00002818	0.1029
15D07397	4.0 % ✓	0.4977216 ± 0.0018079		0.00204202 ± 0.00003092	0.1262
15D07399	4.3 % ✓	0.5485029 ± 0.0017716		0.00188061 ± 0.00002775	0.1169
15D07400	4.6 % ✓	0.5769636 ± 0.0011846		0.00181108 ± 0.00002098	0.0592
15D07401	4.9 % ✓	0.6984713 ± 0.0017164		0.00148696 ± 0.00002179	0.0851
15D07403	5.2 % ✓	0.7134401 ± 0.0014398		0.00143336 ± 0.00001664	0.0626
15D07404	5.5 % ✓	0.8588688 ± 0.0016931		0.00104133 ± 0.00001445	0.0517
15D07405	5.8 % ✓	0.9250205 ± 0.0023618		0.00087425 ± 0.00001786	0.0707
15D07407	6.1 % ✓	0.8214421 ± 0.0015313		0.00114791 ± 0.00001432	0.0456
15D07408	6.5 % ✓	0.9691910 ± 0.0016842		0.00075687 ± 0.00001078	0.0296
15D07409	7.0 % ✓	0.9933717 ± 0.0018485		0.00071087 ± 0.00001187	0.0367
15D07411	7.6 % ✓	0.9956666 ± 0.0018077		0.00069170 ± 0.00001063	0.0342
15D07412	8.4 % ✓	0.9942251 ± 0.0016603		0.00069759 ± 0.00000960	0.0232
15D07413	9.4 % ✓	0.9347546 ± 0.0015019		0.00087523 ± 0.00000916	0.0201
15D07415	10.5 % ✓	0.8676165 ± 0.0014012		0.00104472 ± 0.00001056	0.0214
15D07416	11.7 % ✓	0.7953577 ± 0.0012985		0.00125694 ± 0.00001185	0.0246
15D07417	13.1 % ✓	0.6523974 ± 0.0010083		0.00164292 ± 0.00001347	0.0127
15D07419	14.7 % ✓	0.5532268 ± 0.0008408		0.00189217 ± 0.00001448	0.0081
15D07420	16.5 % ✓	0.5055272 ± 0.0007655		0.00203304 ± 0.00001466	0.0072
15D07421	17.7 % ✓	0.4727875 ± 0.0007291		0.00210743 ± 0.00001572	0.0106
15D07423	18.5 %	0.4468374 ± 0.0007245		0.00220060 ± 0.00001764	0.0177
15D07424	19.5 %	0.4286276 ± 0.0007511		0.00225095 ± 0.00001939	0.0300
15D07425	20.5 %	0.4330079 ± 0.0008037		0.00223251 ± 0.00002047	0.0388
15D07427	21.7 %	0.4485780 ± 0.0008310		0.00220311 ± 0.00001999	0.0399
15D07428	22.8 %	0.4511808 ± 0.0008721		0.00216416 ± 0.00002096	0.0421

Results	40(a)/36(a) ± 2σ		40(r)/39(k) ± 2σ		Age ± 2σ (Ma)	MSWD
Inverse Isochron	295.14 ± 1.71		0.79824 ± 0.00300		2.60 ± 0.01	2.75
Error Chron	± 0.58%		± 0.38%		± 0.44%	0%
					Full External Error ± 0.06	
					Analytical Error ± 0.01	
Statistics	2σ Confidence Limit	1.57	Convergence		0.0029302803	
	Error Magnification	1.6594	Number of Iterations		2	
	Number of Data Points	27	Calculated Line		Weighted York-2	
	Spreading Factor	58.4%				



OSU Argon Geochronology Lab																
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
15D07375	1.9 %	0.570589	0.457	4.5687	3.316	0.438382	8.649	27.8659	0.149	191.4803	0.056	0.83265 ± 0.05595	2.71 ± 0.18	12.12	0.49	2.62 ± 0.17
15D07376	2.0 %	0.540614	0.467	5.2802	3.053	0.494822	8.257	30.6895	0.143	184.5770	0.058	0.82149 ± 0.04918	2.67 ± 0.16	13.66	0.54	2.50 ± 0.15
15D07378	2.1 %	0.469850	0.474	5.1810	3.171	0.499795	7.862	29.0620	0.148	162.9835	0.065	0.84383 ± 0.04600	2.74 ± 0.15	15.04	0.51	2.41 ± 0.15
15D07379	2.2 %	0.451587	0.469	5.2817	2.952	0.424805	9.265	30.5776	0.142	156.6078	0.068	0.77010 ± 0.04160	2.50 ± 0.14	15.03	0.54	2.49 ± 0.15
15D07380	2.3 %	0.373013	0.477	4.6316	3.348	0.388352	9.935	27.3779	0.150	131.9231	0.080	0.80481 ± 0.03930	2.62 ± 0.13	16.70	0.48	2.54 ± 0.17
15D07382	2.4 %	0.404037	0.508	6.1183	2.665	0.509565	7.711	33.1533	0.139	146.1641	0.072	0.82104 ± 0.03720	2.67 ± 0.12	18.62	0.59	2.33 ± 0.12
15D07383	2.5 %	0.371728	0.513	5.9634	2.628	0.458635	8.612	32.7262	0.138	134.5467	0.078	0.76810 ± 0.03511	2.50 ± 0.11	18.68	0.58	2.36 ± 0.12
15D07384	2.6 %	0.369274	0.557	6.3452	2.488	0.461756	8.292	35.2809	0.127	135.7025	0.076	0.76655 ± 0.03504	2.49 ± 0.11	19.93	0.62	2.39 ± 0.12
15D07387	2.7 %	✓ 0.335983	0.525	5.8717	2.617	0.485193	8.330	33.0710	0.131	125.3927	0.084	0.80249 ± 0.03223	2.61 ± 0.10	21.16	0.58	2.42 ± 0.13
15D07388	2.8 %	✓ 0.331043	0.532	6.8328	2.515	0.516157	7.718	37.7466	0.122	127.4948	0.082	0.79930 ± 0.02823	2.60 ± 0.09	23.66	0.67	2.38 ± 0.12
15D07389	2.9 %	✓ 0.279871	0.580	6.4645	2.399	0.452162	8.585	35.6137	0.127	110.8539	0.094	0.80373 ± 0.02764	2.61 ± 0.09	25.82	0.63	2.37 ± 0.11
15D07391	3.0 %	✓ 0.285734	0.568	7.4424	2.190	0.623406	6.049	40.7366	0.116	116.3324	0.090	0.79645 ± 0.02420	2.59 ± 0.08	27.89	0.72	2.35 ± 0.10
15D07392	3.2 %	✓ 0.270649	0.630	7.8320	2.227	0.574484	7.202	43.6477	0.114	113.9863	0.093	0.79228 ± 0.02367	2.58 ± 0.08	30.33	0.77	2.40 ± 0.11
15D07393	3.4 %	✓ 0.253546	0.575	7.9783	2.152	0.567420	7.151	44.6326	0.111	109.6684	0.095	0.79152 ± 0.01995	2.57 ± 0.06	32.21	0.79	2.41 ± 0.10
15D07395	3.6 %	✓ 0.284994	0.564	10.2648	1.565	0.708589	5.501	57.7652	0.101	129.3165	0.080	0.79371 ± 0.01693	2.58 ± 0.06	35.45	1.02	2.42 ± 0.08
15D07396	3.8 %	✓ 0.214211	0.666	8.6375	1.887	0.636279	6.083	49.9779	0.106	102.4366	0.101	0.79568 ± 0.01746	2.59 ± 0.06	38.82	0.88	2.49 ± 0.09
15D07397	4.0 %	✓ 0.162742	0.737	6.5731	2.289	0.500436	7.781	39.2475	0.125	78.8850	0.132	0.79679 ± 0.01894	2.59 ± 0.06	39.64	0.69	2.57 ± 0.12
15D07399	4.3 %	✓ 0.168014	0.718	8.1720	1.993	0.605785	6.388	48.3790	0.110	88.2407	0.118	0.80999 ± 0.01548	2.63 ± 0.05	44.40	0.85	2.55 ± 0.10
15D07400	4.6 %	✓ 0.329321	0.568	17.7789	0.947	1.263133	2.980	103.4291	0.084	179.3482	0.059	0.80564 ± 0.01097	2.62 ± 0.04	46.46	1.83	2.50 ± 0.05
15D07401	4.9 %	✓ 0.182539	0.713	13.7479	1.159	1.078486	3.718	84.0442	0.086	120.3975	0.087	0.80262 ± 0.00959	2.61 ± 0.03	56.02	1.49	2.63 ± 0.06
15D07403	5.2 %	✓ 0.252074	0.565	20.5462	0.829	1.494036	2.729	122.7787	0.081	172.1985	0.061	0.80798 ± 0.00718	2.63 ± 0.02	57.60	2.17	2.57 ± 0.04
15D07404	5.5 %	✓ 0.191339	0.667	25.1976	0.709	1.856119	2.085	152.3353	0.079	177.5015	0.059	0.80605 ± 0.00530	2.62 ± 0.02	69.17	2.69	2.60 ± 0.04
15D07405	5.8 %	✓ 0.098746	0.975	15.1159	1.107	1.196835	3.192	100.2636	0.084	108.4810	0.096	0.80177 ± 0.00620	2.61 ± 0.02	74.10	1.77	2.85 ± 0.06
15D07407	6.1 %	✓ 0.245585	0.603	27.9126	0.633	2.091026	1.862	170.4782	0.078	207.6846	0.051	0.80443 ± 0.00543	2.62 ± 0.02	66.02	3.01	2.63 ± 0.03
15D07408	6.5 %	✓ 0.200248	0.673	39.6332	0.491	2.990128	1.318	243.0234	0.076	250.9666	0.043	0.80102 ± 0.00361	2.61 ± 0.01	77.56	4.29	2.64 ± 0.03
15D07409	7.0 %	✓ 0.152207	0.786	32.3451	0.548	2.485456	1.535	200.7579	0.076	202.2783	0.053	0.79521 ± 0.00388	2.59 ± 0.01	78.91	3.55	2.67 ± 0.03
15D07411	7.6 %	✓ 0.158236	0.722	34.5698	0.559	2.611477	1.521	214.6367	0.076	215.7642	0.049	0.79907 ± 0.00352	2.60 ± 0.01	79.48	3.79	2.67 ± 0.03
15D07412	8.4 %	✓ 0.217935	0.647	47.4235	0.450	3.574440	1.088	292.7625	0.075	294.7266	0.036	0.79847 ± 0.00318	2.60 ± 0.01	79.31	5.17	2.65 ± 0.02
15D07413	9.4 %	✓ 0.349983	0.498	60.5693	0.397	4.415440	0.912	356.7149	0.075	381.9301	0.029	0.79312 ± 0.00319	2.58 ± 0.01	74.07	6.30	2.53 ± 0.02
15D07415	10.5 %	✓ 0.418967	0.485	62.0557	0.390	4.148099	0.949	334.3537	0.075	385.6599	0.029	0.79676 ± 0.00385	2.59 ± 0.01	69.07	5.91	2.32 ± 0.02
15D07416	11.7 %	✓ 0.472257	0.454	61.5533	0.392	3.556072	1.105	288.5784	0.076	363.0677	0.031	0.79031 ± 0.00462	2.57 ± 0.02	62.81	5.10	2.02 ± 0.02
15D07417	13.1 %	✓ 1.001645	0.398	108.2218	0.331	4.924923	0.788	386.4630	0.075	592.6522	0.020	0.78866 ± 0.00624	2.56 ± 0.02	51.42	6.83	1.54 ± 0.01
15D07419	14.7 %	✓ 1.530385	0.371	173.2133	0.307	5.728597	0.694	434.1799	0.074	785.0412	0.015	0.79690 ± 0.00784	2.59 ± 0.03	44.06	7.67	1.08 ± 0.01
15D07420	16.5 %	✓ 1.978857	0.347	271.2484	0.299	6.249182	0.629	474.4180	0.074	938.5799	0.014	0.78975 ± 0.00866	2.57 ± 0.03	39.90	8.38	0.75 ± 0.00
15D07421	17.7 %	✓ 1.489930	0.360	187.6240	0.305	4.220455	0.930	323.2632	0.075	683.7983	0.017	0.79794 ± 0.00991	2.60 ± 0.03	37.71	5.71	0.74 ± 0.00
15D07423	18.5 %	1.068906	0.390	100.2624	0.335	2.803913	1.324	211.7323	0.077	473.9091	0.024	0.78266 ± 0.01176	2.55 ± 0.04	34.96	3.74	0.91 ± 0.01
15D07424	19.5 %	0.770491	0.419	67.5539	0.379	1.855142	2.142	143.3651	0.081	334.5133	0.034	0.78120 ± 0.01348	2.54 ± 0.04	33.47	2.53	0.91 ± 0.01
15D07425	20.5 %	0.614895	0.445	61.0807	0.395	1.510278	2.559	116.1740	0.083	268.3178	0.041	0.78588 ± 0.01410	2.56 ± 0.05	34.01	2.05	0.82 ± 0.01
15D07427	21.7 %	0.595068	0.436	76.0364	0.369	1.546856	2.448	117.1242	0.083	261.1053	0.041	0.77797 ± 0.01330	2.53 ± 0.04	34.88	2.07	0.66 ± 0.01
15D07428	22.8 %	0.554936	0.464	79.4419	0.358	1.472334	2.642	111.3711	0.086	246.8376	0.044	0.79900 ± 0.01388	2.60 ± 0.05	36.03	1.97	0.60 ± 0.00
Σ		19.012026	0.086	1702.5708	0.098	72.418450	0.342	5659.7982	0.016	9991.3515	0.007					

Information on Analysis and Constants Used in Calculations	Results	40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD	39Ar(k) (% ,n)	K/Ca ± 2σ
Sample = 1180050-1A	Age Plateau		0.79774	± 0.00187		83.28	
Material = Groundmass	Error Mean		± 0.23%	2.59 ± 0.01 ± 0.33%	2.67 0%	27	1.07 ± 0.23
Location = Kerguelen Plateau				Full External Error ± 0.06	1.55	2σ Confidence Limit	
Analyst = Dan Miggins				Analytical Error ± 0.01	1.6328	Error Magnification	
Project = KERGUELEN   FALLOON (14-PIL-01)							
Mass Discrimination Law = LIN	Total Fusion Age		0.79534	± 0.00174 ± 0.22%		40	1.43 ± 0.00
Irradiation = 14-OSU-07 (7B19-14)				Full External Error ± 0.06			
J = 0.00179979 ± 0.00000211				Analytical Error ± 0.01			
FCT-NM = 28.201 ± 0.023 Ma							
IGSN = Undefined							
Preferred Age = Undefined	Normal Isochron	295.09	± 1.70 ± 0.58%	0.79818	± 0.00299 ± 0.37%	2.60 ± 0.01 ± 0.44%	2.74 83.28 0%
Classification = Undefined	Error Chron						27
Experiment Type = Incremental Heating				Full External Error ± 0.06	1.57	2σ Confidence Limit	
Extraction Method = Undefined				Analytical Error ± 0.01	1.6556	Error Magnification	
Heating = 77 sec					18	Number of Iterations	
Isolation = 6.00 min					0.0000074721	Convergence	
Instrument = ARGUS-VI-D							
Lithology = Undefined	Inverse Isochron	295.14	± 1.71 ± 0.58%	0.79824	± 0.00300 ± 0.38%	2.60 ± 0.01 ± 0.44%	2.75 83.28 0%
Lat-Lon = Undefined - Undefined	Error Chron						27
Collector Calibrations = 40Ar 36Ar				Full External Error ± 0.06	1.57	2σ Confidence Limit	



OSU Argon Geochronology Lab																																	
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
15D07375	1.9 %	0.569381	0.46	0.0000000	0.00	0.0012061	3.32	0.0000016	255.85	4.5687	3.32	0.1064174	0.46	0.0000000	0.00	0.317079	0.15	0.0000635	3.32	0.0148227	255.85	27.8628	0.15	0.0030747	3.32	23.1999	3.36	168.2522	0.46	0.0000000	0.00	0.0281414	0.15
15D07376	2.0 %	0.539215	0.47	0.0000000	0.00	0.0013940	3.05	0.0000048	91.29	5.2802	3.05	0.1007792	0.47	0.0000000	0.00	0.349206	0.14	0.0000734	3.05	0.0447638	91.30	30.6859	0.14	0.0035536	3.05	25.2081	2.99	159.3379	0.47	0.0000000	0.00	0.0309928	0.14
15D07378	2.1 %	0.468473	0.48	0.0000000	0.00	0.0013678	3.17	0.0000088	48.24	5.1810	3.17	0.0875576	0.48	0.0000000	0.00	0.330686	0.15	0.0000720	3.17	0.0814797	48.25	29.0585	0.15	0.0034868	3.17	24.5203	2.72	138.4338	0.48	0.0000000	0.00	0.0293491	0.15
15D07379	2.2 %	0.450192	0.47	0.0000000	0.00	0.0013944	2.95	0.0000000	0.00	5.2817	2.95	0.0841409	0.47	0.0000000	0.00	0.347932	0.14	0.0000734	2.95	0.0000000	0.00	30.5740	0.14	0.0035546	2.95	23.5451	2.70	133.0318	0.47	0.0000000	0.00	0.0308798	0.14
15D07380	2.3 %	0.371790	0.48	0.0000000	0.00	0.0012227	3.35	0.0000008	530.46	4.6316	3.35	0.0694875	0.48	0.0000000	0.00	0.311525	0.15	0.0000644	3.35	0.0072745	530.46	27.3748	0.15	0.0031171	3.35	22.0316	2.44	109.8638	0.48	0.0000000	0.00	0.0276486	0.15
15D07382	2.4 %	0.402416	0.51	0.0000000	0.00	0.0016152	2.67	0.0000062	68.91	6.1183	2.67	0.0752115	0.51	0.0000000	0.00	0.377238	0.14	0.0000850	2.67	0.0570307	68.92	33.1492	0.14	0.0041176	2.67	27.2168	2.26	118.9138	0.51	0.0000000	0.00	0.0334807	0.14
15D07383	2.5 %	0.370152	0.52	0.0000000	0.00	0.0015743	2.63	0.0000018	232.48	5.9634	2.63	0.0691813	0.52	0.0000000	0.00	0.372378	0.14	0.0000829	2.63	0.0169925	232.48	32.7222	0.14	0.0040134	2.63	25.1339	2.28	109.3798	0.52	0.0000000	0.00	0.0330494	0.14
15D07384	2.6 %	0.367599	0.56	0.0000000	0.00	0.0016751	2.49	0.0000000	0.00	6.3452	2.49	0.0687042	0.56	0.0000000	0.00	0.401448	0.13	0.0000882	2.49	0.0000000	0.00	35.2766	0.13	0.0042703	2.49	27.0414	2.28	108.6255	0.56	0.0000000	0.00	0.0356294	0.13
15D07387	2.7 %	✓ 0.334428	0.53	0.0000000	0.00	0.0015501	2.62	0.0000050	87.30	5.8717	2.62	0.0625046	0.53	0.0000000	0.00	0.376303	0.13	0.0000816	2.62	0.0463042	87.30	33.0670	0.13	0.0039517	2.62	26.5359	2.00	98.8234	0.53	0.0000000	0.00	0.0333977	0.13
15D07388	2.8 %	✓ 0.329237	0.54	0.0000000	0.00	0.0018039	2.51	0.0000027	159.23	6.8328	2.51	0.0615343	0.54	0.0000000	0.00	0.429504	0.12	0.0000950	2.51	0.0250239	159.23	37.7420	0.12	0.0045985	2.51	30.1673	1.76	97.2894	0.54	0.0000000	0.00	0.0381194	0.12
15D07389	2.9 %	✓ 0.278164	0.58	0.0000000	0.00	0.0017066	2.40	0.0000000	0.00	6.4645	2.40	0.0519889	0.58	0.0000000	0.00	0.405234	0.13	0.0000899	2.40	0.0000000	0.00	35.6093	0.13	0.0043506	2.40	28.6204	1.71	82.1975	0.58	0.0000000	0.00	0.0359654	0.13
15D07391	3.0 %	✓ 0.283758	0.57	0.0000000	0.00	0.0019648	2.19	0.0000116	35.34	7.4424	2.19	0.0530344	0.57	0.0000000	0.00	0.463526	0.12	0.0001034	2.19	0.1067426	35.35	40.7316	0.12	0.0050087	2.19	32.4408	1.51	83.8505	0.57	0.0000000	0.00	0.0411389	0.12
15D07392	3.2 %	✓ 0.268579	0.63	0.0000000	0.00	0.0020677	2.23	0.0000030	150.34	7.8320	2.23	0.0501974	0.63	0.0000000	0.00	0.496651	0.11	0.0001089	2.23	0.0275272	150.34	43.6424	0.11	0.0052710	2.23	34.5772	1.49	79.3650	0.63	0.0000000	0.00	0.0440788	0.11
15D07393	3.4 %	✓ 0.251439	0.58	0.0000000	0.00	0.0021063	2.15	0.0000013	325.75	7.9783	2.15	0.0469939	0.58	0.0000000	0.00	0.507857	0.11	0.0001109	2.15	0.0124581	325.75	44.6272	0.11	0.0053694	2.15	35.3232	1.26	74.3001	0.58	0.0000000	0.00	0.0450735	0.11
15D07395	3.6 %	✓ 0.282284	0.57	0.0000000	0.00	0.0027099	1.56	0.0000000	0.00	10.2648	1.56	0.0527589	0.57	0.0000000	0.00	0.657289	0.10	0.0001427	1.56	0.0000000	0.00	57.7583	0.10	0.0069082	1.56	45.8432	1.06	83.4150	0.57	0.0000000	0.00	0.0583359	0.10
15D07396	3.8 %	✓ 0.211927	0.67	0.0000000	0.00	0.0022803	1.89	0.0000030	138.91	8.6375	1.89	0.0396092	0.67	0.0000000	0.00	0.568682	0.11	0.0001201	1.89	0.0278678	138.91	49.9721	0.11	0.0058130	1.89	39.7615	1.09	62.6246	0.67	0.0000000	0.00	0.0504718	0.11
15D07397	4.0 %	✓ 0.161004	0.75	0.0000000	0.00	0.0017353	2.29	0.0000026	164.56	6.5731	2.29	0.0300917	0.75	0.0000000	0.00	0.446586	0.13	0.0000914	2.29	0.0236674	164.56	39.2430	0.13	0.0044237	2.29	31.2686	1.18	47.5767	0.75	0.0000000	0.00	0.0396355	0.13
15D07399	4.3 %	✓ 0.165854	0.73	0.0000000	0.00	0.0021574	1.99	0.0000026	160.05	8.1720	1.99	0.0309982	0.73	0.0000000	0.00	0.550490	0.11	0.0001136	1.99	0.0241834	160.05	48.3735	0.11	0.0054998	1.99	39.1819	0.95	49.0099	0.73	0.0000000	0.00	0.0488572	0.11
15D07400	4.6 %	✓ 0.324624	0.58	0.0000000	0.00	0.0046936	0.95	0.0000027	148.71	17.7789	0.95	0.0606723	0.58	0.0000000	0.00	1.176887	0.08	0.0002471	0.95	0.0253270	148.71	103.4171	0.08	0.0119652	0.95	83.3173	0.68	95.9264	0.58	0.0000000	0.00	0.1044513	0.08
15D07401	4.9 %	✓ 0.178900	0.73	0.0000000	0.00	0.0036294	1.16	0.0000096	45.31	13.7479	1.16	0.0334363	0.73	0.0000000	0.00	0.956318	0.09	0.0001911	1.16	0.0885415	45.32	84.0349	0.09	0.0092523	1.16	67.4478	0.59	52.8648	0.73	0.0000000	0.00	0.0848753	0.09
15D07403	5.2 %	✓ 0.246644	0.58	0.0000000	0.00	0.0054242	0.83	0.0000055	80.63	20.5462	0.83	0.0460978	0.58	0.0000000	0.00	1.397064	0.08	0.0002856	0.83	0.0505887	80.63	122.7648	0.08	0.0138276	0.83	99.1911	0.44	72.8834	0.58	0.0000000	0.00	0.1239925	0.08
15D07404	5.5 %	✓ 0.184677	0.69	0.0000000	0.00	0.0066522	0.71	0.0000095	44.08	25.1976	0.71	0.0345161	0.69	0.0000000	0.00	1.733383	0.08	0.0003502	0.71	0.0878700	44.09	152.3184	0.08	0.0169580	0.71	122.7756	0.32	54.5720	0.69	0.0000000	0.00	0.1538415	0.08
15D07405	5.8 %	✓ 0.094751	1.02	0.0000000	0.00	0.0039906	1.11	0.0000041	100.50	15.1159	1.11	0.0177090	1.02	0.0000000	0.00	1.140884	0.08	0.0002101	1.11	0.0380311	100.50	100.2535	0.08	0.0101730	1.11	80.3807	0.38	27.9990	1.02	0.0000000	0.00	0.1012560	0.08
15D07407	6.1 %	✓ 0.238205	0.62	0.0000000	0.00	0.0073689	0.63	0.0000115	36.67	27.9126	0.63	0.0445204	0.62	0.0000000	0.00	1.939828	0.08	0.0003880	0.63	0.1062896	36.68	170.4594	0.08	0.0187851	0.63	137.1230	0.33	70.3895	0.62	0.0000000	0.00	0.1721640	0.08
15D07408	6.5 %	✓ 0.189764	0.71	0.0000000	0.00	0.0104632	0.49	0.0000205	20.92	39.6332	0.49	0.0354669	0.71	0.0000000	0.00	2.765302	0.08	0.0005509	0.49	0.1888074	20.94	242.9967	0.08	0.0266731	0.49	194.6459	0.21	56.0753	0.71	0.0000000	0.00	0.2454267	0.08
15D07409	7.0 %	✓ 0.143649	0.83	0.0000000	0.00	0.0085391	0.55	0.0000189	22.00	32.3451	0.55	0.0268479	0.83	0.0000000	0.00	2.284377	0.08	0.0004496	0.55	0.1737817	22.02	200.7361	0.08	0.0217682	0.55	159.6273	0.23	42.4482	0.83	0.0000000	0.00	0.2027434	0.08
15D07411	7.6 %	✓ 0.149094	0.77	0.0000000	0.00	0.0091264	0.56	0.0000153	28.25	34.5698	0.56	0.0278656	0.77	0.0000000	0.00	2.442301	0.08	0.0004805	0.56	0.1408306	28.26	214.6134	0.08	0.0232655	0.56	171.4902	0.21	44.0572	0.77	0.0000000	0.00	0.2167596	0.08
15D07412	8.4 %	✓ 0.205393	0.69	0.0000000	0.00	0.0125198	0.45	0.0000222	19.12	47.4235	0.45	0.0383879	0.69	0.0000000	0.00	3.331274	0.08	0.0006592	0.45	0.2041188	19.14	292.7306	0.08	0.0319160	0.45	233.7374	0.18	60.6935	0.69	0.0000000	0.00	0.2956579	0.08
15D07413	9.4 %	✓ 0.333961	0.52	0.0000000	0.00	0.0159903	0.40	0.0000319	13.80	60.5693	0.40	0.0624174	0.52	0.0000000	0.00	4.058952	0.07	0.0008419	0.40	0.2932286	13.83	356.6742	0.07	0.0407631	0.40	282.8843	0.19	98.6855	0.52	0.0000000	0.00	0.3602409	0.07
15D07415	10.5 %	✓ 0.402556	0.50	0.0000000	0.00	0.0163827	0.39	0.0000291	14.79	62.0557	0.39	0.0752377	0.50	0.0000000	0.00	3.804469	0.08	0.0008626	0.39	0.2675293	14.82	334.3119	0.08	0.0417635	0.39	266.3670	0.23	118.9552	0.50	0.0000000	0.00	0.3376550	0.08
15D07416	11.7 %	✓ 0.455986	0.47	0.0000000																													



Additional Parameters		40Ar/39Ar	1σ	37Ar/39Ar	1σ	36Ar/39Ar	1σ	Time (days)	37Ar (decay)	39Ar (decay)	40Ar (moles)
15D07375	1.9 %	6.871497	0.010941	0.163952	0.005442	0.020476	0.000099	66.554	3.732379	1.00047060	9.191E-12
15D07376	2.0 %	6.014347	0.009302	0.172053	0.005259	0.017616	0.000086	66.565	3.733147	1.00047067	8.860E-12
15D07378	2.1 %	5.608137	0.009099	0.178273	0.005660	0.016167	0.000080	66.583	3.734530	1.00047080	7.823E-12
15D07379	2.2 %	5.121653	0.008067	0.172730	0.005104	0.014769	0.000072	66.593	3.735247	1.00047087	7.517E-12
15D07380	2.3 %	4.818594	0.008175	0.169174	0.005670	0.013625	0.000068	66.603	3.735965	1.00047094	6.332E-12
15D07382	2.4 %	4.408734	0.006885	0.184545	0.004925	0.012187	0.000064	66.621	3.737297	1.00047107	7.016E-12
15D07383	2.5 %	4.111288	0.006503	0.182221	0.004795	0.011359	0.000060	66.631	3.738015	1.00047114	6.458E-12
15D07384	2.6 %	3.846344	0.005707	0.179849	0.004480	0.010467	0.000060	66.640	3.738682	1.00047120	6.514E-12
15D07387	2.7 % ✓	3.791623	0.005916	0.177549	0.004653	0.010159	0.000055	66.667	3.740682	1.00047139	6.019E-12
15D07388	2.8 % ✓	3.377653	0.004969	0.181017	0.004557	0.008770	0.000048	66.676	3.741349	1.00047146	6.120E-12
15D07389	2.9 % ✓	3.112679	0.004920	0.181519	0.004360	0.007859	0.000047	66.685	3.742016	1.00047152	5.321E-12
15D07391	3.0 % ✓	2.855720	0.004207	0.182695	0.004006	0.007014	0.000041	66.702	3.743300	1.00047164	5.584E-12
15D07392	3.2 % ✓	2.611509	0.003850	0.179437	0.004002	0.006201	0.000040	66.711	3.743967	1.00047171	5.471E-12
15D07393	3.4 % ✓	2.457138	0.003592	0.178755	0.003852	0.005681	0.000033	66.719	3.744584	1.00047177	5.264E-12
15D07395	3.6 % ✓	2.238658	0.002894	0.177698	0.002786	0.004934	0.000028	66.737	3.745868	1.00047189	6.207E-12
15D07396	3.8 % ✓	2.049638	0.003015	0.172827	0.003266	0.004286	0.000029	66.746	3.746536	1.00047195	4.917E-12
15D07397	4.0 % ✓	2.009939	0.003649	0.167477	0.003839	0.004147	0.000031	66.754	3.747153	1.00047201	3.786E-12
15D07399	4.3 % ✓	1.823947	0.002945	0.168916	0.003372	0.003473	0.000025	66.772	3.748438	1.00047213	4.236E-12
15D07400	4.6 % ✓	1.734021	0.001780	0.171894	0.001635	0.003184	0.000018	66.781	3.749106	1.00047220	8.609E-12
15D07401	4.9 % ✓	1.432550	0.001759	0.163579	0.001900	0.002172	0.000016	66.789	3.749724	1.00047226	5.779E-12
15D07403	5.2 % ✓	1.402511	0.001415	0.167344	0.001393	0.002053	0.000012	66.806	3.751010	1.00047238	8.266E-12
15D07404	5.5 % ✓	1.165202	0.001148	0.165409	0.001180	0.001256	0.000008	66.815	3.751627	1.00047244	8.520E-12
15D07405	5.8 % ✓	1.081957	0.001380	0.150761	0.001673	0.000985	0.000010	66.824	3.752296	1.00047250	5.207E-12
15D07407	6.1 % ✓	1.218247	0.001135	0.163731	0.001044	0.001441	0.000009	66.841	3.753583	1.00047262	9.969E-12
15D07408	6.5 % ✓	1.032685	0.000897	0.163084	0.000811	0.000824	0.000006	66.849	3.754201	1.00047268	1.205E-11
15D07409	7.0 % ✓	1.007573	0.000937	0.161115	0.000891	0.000758	0.000006	66.858	3.754870	1.00047275	9.709E-12
15D07411	7.6 % ✓	1.005253	0.000912	0.161062	0.000908	0.000737	0.000005	66.876	3.756158	1.00047287	1.036E-11
15D07412	8.4 % ✓	1.006709	0.000840	0.161986	0.000739	0.000744	0.000005	66.884	3.756777	1.00047293	1.415E-11
15D07413	9.4 % ✓	1.070687	0.000860	0.169797	0.000686	0.000981	0.000005	66.893	3.757447	1.00047299	1.833E-11
15D07415	10.5 % ✓	1.153449	0.000931	0.185599	0.000738	0.001253	0.000006	66.910	3.758735	1.00047311	1.851E-11
15D07416	11.7 % ✓	1.258125	0.001027	0.213298	0.000851	0.001636	0.000008	66.919	3.759354	1.00047317	1.743E-11
15D07417	13.1 % ✓	1.533529	0.001185	0.280032	0.000951	0.002592	0.000010	66.928	3.760024	1.00047324	2.845E-11
15D07419	14.7 % ✓	1.808101	0.001374	0.398944	0.001260	0.003525	0.000013	66.945	3.761314	1.00047336	3.768E-11
15D07420	16.5 % ✓	1.978382	0.001497	0.571750	0.001764	0.004171	0.000015	66.953	3.761933	1.00047342	4.505E-11
15D07421	17.7 % ✓	2.115299	0.001630	0.580406	0.001825	0.004609	0.000017	66.963	3.762604	1.00047348	3.282E-11
15D07423	18.5 %	2.238247	0.001814	0.473534	0.001628	0.005048	0.000020	66.980	3.763895	1.00047360	2.275E-11
15D07424	19.5 %	2.333297	0.002044	0.471202	0.001827	0.005374	0.000023	66.989	3.764566	1.00047367	1.606E-11
15D07425	20.5 %	2.309619	0.002143	0.525769	0.002122	0.005293	0.000024	66.998	3.765237	1.00047373	1.288E-11
15D07427	21.7 %	2.229302	0.002064	0.649195	0.002454	0.005081	0.000023	67.016	3.766580	1.00047386	1.253E-11
15D07428	22.8 %	2.216352	0.002141	0.713308	0.002625	0.004983	0.000024	67.025	3.767252	1.00047392	1.185E-11



Procedure Blanks		36Ar [fA]	1σ	37Ar [fA]	1σ	38Ar [fA]	1σ	39Ar [fA]	1σ	40Ar [fA]	1σ
15D07375	1.9 %	0.0108484	0.0003106	0.0039324	0.0290858	0.0887274	0.0280722	0.0049511	0.0243445	2.9825720	0.0978553
15D07376	2.0 %	0.0105371	0.0003106	0.0057510	0.0290858	0.0893942	0.0280722	0.0032654	0.0243445	2.9250137	0.0978553
15D07378	2.1 %	0.0101341	0.0003106	0.0178703	0.0290858	0.0891629	0.0280722	0.0004359	0.0243445	2.8499422	0.0978553
15D07379	2.2 %	0.0099921	0.0003106	0.0217734	0.0290858	0.0884704	0.0280722	0.0009275	0.0243445	2.8227730	0.0978553
15D07380	2.3 %	0.0098881	0.0003106	0.0242490	0.0290858	0.0874815	0.0280722	0.0022201	0.0243445	2.8019834	0.0978553
15D07382	2.4 %	0.0097770	0.0003106	0.0255535	0.0290858	0.0850813	0.0280722	0.0044328	0.0243445	2.7764622	0.0978553
15D07383	2.5 %	0.0097523	0.0003106	0.0247388	0.0290858	0.0835952	0.0280722	0.0055230	0.0243445	2.7679084	0.0978553
15D07384	2.6 %	0.0097460	0.0003106	0.0231825	0.0290858	0.0821550	0.0280722	0.0064720	0.0243445	2.7621998	0.0978553
15D07387	2.7 %	0.0097923	0.0003106	0.0149194	0.0290858	0.0778651	0.0280722	0.0089525	0.0243445	2.7519011	0.0978553
15D07388	2.8 %	0.0098201	0.0003106	0.0112867	0.0290858	0.0765521	0.0280722	0.0096572	0.0243445	2.7490976	0.0978553
15D07389	2.9 %	0.0098503	0.0003106	0.0073660	0.0290858	0.0753422	0.0280722	0.0103008	0.0243445	2.7459586	0.0978553
15D07391	3.0 %	0.0099078	0.0003106	0.0006712	0.0290858	0.0733823	0.0280722	0.0113669	0.0243445	2.7379848	0.0978553
15D07392	3.2 %	0.0099346	0.0003106	0.0049552	0.0290858	0.0725854	0.0280722	0.0118321	0.0243445	2.7324767	0.0978553
15D07393	3.4 %	0.0099560	0.0003106	0.0088861	0.0290858	0.0719990	0.0280722	0.0122072	0.0243445	2.7264498	0.0978553
15D07395	3.6 %	0.0099874	0.0003106	0.0167520	0.0290858	0.0712632	0.0280722	0.0128216	0.0243445	2.7109806	0.0978553
15D07396	3.8 %	0.0099958	0.0003106	0.0205432	0.0290858	0.0711462	0.0280722	0.0130519	0.0243445	2.7015343	0.0978553
15D07397	4.0 %	0.0099986	0.0003106	0.0237892	0.0290858	0.0711984	0.0280722	0.0132102	0.0243445	2.6921501	0.0978553
15D07399	4.3 %	0.0099897	0.0003106	0.0295647	0.0290858	0.0717805	0.0280722	0.0133730	0.0243445	2.6714768	0.0978553
15D07400	4.6 %	0.0099783	0.0003106	0.0319394	0.0290858	0.0723172	0.0280722	0.0133684	0.0243445	2.6607787	0.0978553
15D07401	4.9 %	0.0099646	0.0003106	0.0336925	0.0290858	0.0729385	0.0280722	0.0133099	0.0243445	2.6514248	0.0978553
15D07403	5.2 %	0.0099310	0.0003106	0.0358332	0.0290858	0.0745540	0.0280722	0.0130210	0.0243445	2.6354039	0.0978553
15D07404	5.5 %	0.0099150	0.0003106	0.0360672	0.0290858	0.0754451	0.0280722	0.0128021	0.0243445	2.6303885	0.0978553
15D07405	5.8 %	0.0099002	0.0003106	0.0356943	0.0290858	0.0764612	0.0280722	0.0125062	0.0243445	2.6277696	0.0978553
15D07407	6.1 %	0.0098871	0.0003106	0.0330301	0.0290858	0.0784471	0.0280722	0.0117656	0.0243445	2.6338230	0.0978553
15D07408	6.5 %	0.0098926	0.0003106	0.0307942	0.0290858	0.0793536	0.0280722	0.0113299	0.0243445	2.6433887	0.0978553
15D07409	7.0 %	0.0099107	0.0003106	0.0276419	0.0290858	0.0802514	0.0280722	0.0107992	0.0243445	2.6598109	0.0978553
15D07411	7.6 %	0.0099933	0.0003106	0.0193776	0.0290858	0.0815665	0.0280722	0.0096069	0.0243445	2.7129258	0.0978553
15D07412	8.4 %	0.0100615	0.0003106	0.0143564	0.0290858	0.0819216	0.0280722	0.0089544	0.0243445	2.7504099	0.0978553
15D07413	9.4 %	0.0101612	0.0003106	0.0081319	0.0290858	0.0820376	0.0280722	0.0081888	0.0243445	2.8013056	0.0978553
15D07415	10.5 %	0.0104444	0.0003106	0.0061535	0.0290858	0.0812626	0.0280722	0.0065449	0.0243445	2.9340343	0.0978553
15D07416	11.7 %	0.0106309	0.0003106	0.0140954	0.0290858	0.0803177	0.0280722	0.0056756	0.0243445	3.0164057	0.0978553
15D07417	13.1 %	0.0108764	0.0003106	0.0234902	0.0290858	0.0787919	0.0280722	0.0046751	0.0243445	3.1211413	0.0978553
15D07419	14.7 %	0.0127899	0.0003246	0.0102367	0.0283440	0.0669540	0.0271857	0.1679076	0.0324745	3.9545049	0.0987860
15D07420	16.5 %	0.0128516	0.0003246	0.0129575	0.0283440	0.0650808	0.0271857	0.1867472	0.0324745	4.0191637	0.0987860
15D07421	17.7 %	0.0127682	0.0003246	0.0159050	0.0283440	0.0636084	0.0271857	0.2023736	0.0324745	4.0406825	0.0987860
15D07423	18.5 %	0.0121688	0.0003246	0.0215733	0.0283440	0.0624047	0.0271857	0.2184426	0.0324745	3.9402129	0.0987860
15D07424	19.5 %	0.0116288	0.0003246	0.0245208	0.0283440	0.0626254	0.0271857	0.2195280	0.0324745	3.8142057	0.0987860
15D07425	20.5 %	0.0109325	0.0003246	0.0274683	0.0283440	0.0634252	0.0271857	0.2156389	0.0324745	3.6377290	0.0987860
15D07427	21.7 %	0.0090713	0.0003246	0.0333634	0.0283440	0.0667626	0.0271857	0.1929371	0.0324745	3.1333676	0.0987860
15D07428	22.8 %	0.0079064	0.0003246	0.0363109	0.0283440	0.0693000	0.0271857	0.1741244	0.0324745	2.8054827	0.0987860



OSU Argon Geochronology Lab																					
Intercept Values		36Ar [fA]	1σ	r2		37Ar [fA]	1σ	r2		38Ar [fA]	1σ	r2		39Ar [fA]	1σ	r2		40Ar [fA]	1σ	r2	
15D07375	1.9 %	0.548888	0.001804	0.7803	EXP 150 of 150	1.1960	0.0269	0.0157	EXP 150 of 150	0.3438784	0.0247297	0.0027	EXP 150 of 150	27.6646	0.0265	0.9775	EXP 150 of 150	195.0273	0.0417	0.9092	EXP 150 of 150
15D07376	2.0 %	0.520311	0.001771	0.7481	EXP 150 of 150	1.3922	0.0305	0.0407	EXP 150 of 150	0.3989077	0.0289324	0.0109	EXP 150 of 150	30.4700	0.0286	0.9776	EXP 150 of 150	188.0462	0.0448	0.9037	EXP 150 of 150
15D07378	2.1 %	0.453181	0.001576	0.7009	EXP 150 of 150	1.3778	0.0316	0.0685	EXP 150 of 150	0.4040464	0.0267418	0.0702	EXP 150 of 150	28.8568	0.0282	0.9770	EXP 150 of 150	166.3140	0.0426	0.8874	EXP 150 of 150
15D07379	2.2 %	0.435818	0.001483	0.7332	EXP 150 of 150	1.4079	0.0285	0.0524	EXP 150 of 150	0.3307369	0.0268339	0.0106	EXP 150 of 150	30.3631	0.0279	0.9797	EXP 150 of 150	159.8923	0.0412	0.8528	EXP 150 of 150
15D07380	2.3 %	0.361623	0.001251	0.6460	EXP 150 of 150	1.2395	0.0282	0.0222	EXP 150 of 150	0.2957530	0.0257158	0.0007	EXP 150 of 150	27.1873	0.0258	0.9786	EXP 150 of 150	135.1140	0.0399	0.0014	EXP 150 of 150
15D07382	2.4 %	0.390766	0.001513	0.6193	EXP 150 of 150	1.6303	0.0310	0.1465	EXP 150 of 150	0.4177692	0.0267342	0.0196	EXP 150 of 150	32.9242	0.0302	0.9804	EXP 150 of 150	149.3714	0.0387	0.8858	EXP 150 of 150
15D07383	2.5 %	0.360275	0.001410	0.6765	EXP 150 of 150	1.5886	0.0287	0.1178	EXP 150 of 150	0.3689965	0.0270324	0.0029	EXP 150 of 150	32.5012	0.0291	0.9818	EXP 150 of 150	137.7113	0.0374	0.7446	EXP 150 of 150
15D07384	2.6 %	0.357955	0.001592	0.5938	EXP 150 of 150	1.6869	0.0290	0.1074	EXP 149 of 150	0.3735162	0.0252842	0.0012	EXP 150 of 150	35.0388	0.0272	0.9853	EXP 150 of 150	138.8647	0.0340	0.8251	EXP 150 of 150
15D07387	2.7 %	0.326609	0.001314	0.5987	EXP 150 of 150	1.5536	0.0275	0.0632	EXP 150 of 150	0.4009349	0.0283203	0.0021	EXP 150 of 150	32.8470	0.0262	0.9850	EXP 150 of 150	128.5143	0.0411	0.7511	EXP 150 of 150
15D07388	2.8 %	0.321979	0.001324	0.6431	EXP 150 of 150	1.8015	0.0340	0.0649	EXP 150 of 150	0.4328037	0.0275135	0.0039	EXP 150 of 150	37.4903	0.0273	0.9872	EXP 150 of 150	130.6198	0.0379	0.8097	EXP 149 of 150
15D07389	2.9 %	0.273756	0.001262	0.5284	EXP 150 of 150	1.7008	0.0279	0.1351	EXP 150 of 150	0.3708617	0.0260536	0.0004	EXP 150 of 150	35.3731	0.0277	0.9850	EXP 150 of 150	113.9266	0.0349	0.0646	EXP 150 of 150
15D07391	3.0 %	0.279342	0.001252	0.5684	EXP 150 of 150	1.9483	0.0307	0.1019	EXP 150 of 150	0.5418096	0.0244079	0.0816	EXP 150 of 150	40.4610	0.0273	0.9896	EXP 150 of 150	119.4134	0.0391	0.6431	EXP 150 of 150
15D07392	3.2 %	0.265145	0.001370	0.4079	EXP 135 of 135	2.0457	0.0347	0.0829	EXP 135 of 135	0.4943289	0.0296389	0.0213	EXP 135 of 135	43.3520	0.0292	0.9895	EXP 135 of 135	117.0548	0.0418	0.4830	EXP 135 of 135
15D07393	3.4 %	0.249039	0.001121	0.4558	EXP 150 of 150	2.0797	0.0337	0.1276	EXP 150 of 150	0.4879446	0.0285408	0.0032	EXP 150 of 150	44.3303	0.0279	0.9905	EXP 150 of 150	112.7182	0.0365	0.2805	EXP 150 of 150
15D07395	3.6 %	0.278724	0.001236	0.5307	EXP 149 of 150	2.6694	0.0293	0.2016	EXP 150 of 150	0.6279893	0.0262755	0.0029	EXP 150 of 150	57.3710	0.0319	0.9927	EXP 150 of 150	132.4087	0.0354	0.9280	EXP 150 of 150
15D07396	3.8 %	0.211987	0.001153	0.4234	EXP 150 of 150	2.2394	0.0305	0.1506	EXP 150 of 150	0.5567491	0.0258804	0.0052	EXP 150 of 150	49.6388	0.0297	0.9916	EXP 150 of 150	105.4401	0.0357	0.0004	EXP 150 of 150
15D07397	4.0 %	0.163457	0.000981	0.2273	EXP 150 of 150	1.6957	0.0260	0.1383	EXP 150 of 150	0.4226438	0.0262323	0.0154	EXP 150 of 150	38.9842	0.0311	0.9848	EXP 150 of 150	81.8097	0.0356	0.8946	EXP 150 of 150
15D07399	4.3 %	0.168420	0.000982	0.1694	EXP 150 of 150	2.1075	0.0305	0.1566	EXP 150 of 150	0.5260226	0.0258761	0.0210	EXP 150 of 150	48.0515	0.0312	0.9904	EXP 150 of 150	91.1723	0.0361	0.6372	EXP 150 of 150
15D07400	4.6 %	0.320513	0.001452	0.5321	EXP 150 of 150	4.6166	0.0301	0.3119	EXP 150 of 150	1.1741721	0.0242642	0.0276	EXP 150 of 150	102.7137	0.0341	0.9975	EXP 150 of 150	182.5377	0.0418	0.9873	EXP 150 of 150
15D07401	4.9 %	0.182090	0.001063	0.1918	EXP 150 of 150	3.5603	0.0279	0.2256	EXP 150 of 150	0.9913370	0.0278490	0.0854	EXP 150 of 150	83.4653	0.0293	0.9971	EXP 150 of 150	123.4039	0.0394	0.8216	EXP 150 of 150
15D07403	5.2 %	0.247626	0.001084	0.4542	EXP 150 of 150	5.3336	0.0298	0.5040	EXP 150 of 150	1.3997955	0.0287352	0.0306	EXP 150 of 150	121.9266	0.0337	0.9982	EXP 150 of 150	175.3415	0.0360	0.9876	EXP 149 of 150
15D07404	5.5 %	0.190339	0.001022	0.0843	EXP 150 of 150	6.5478	0.0310	0.5834	EXP 150 of 150	1.7562168	0.0257458	0.1140	EXP 150 of 150	151.2748	0.0359	0.9987	EXP 150 of 150	180.6552	0.0395	0.9855	EXP 150 of 150
15D07405	5.8 %	0.103013	0.000804	0.0021	EXP 150 of 150	3.9132	0.0305	0.2375	EXP 149 of 150	1.1046031	0.0251062	0.0364	EXP 150 of 150	99.5697	0.0334	0.9975	EXP 150 of 150	111.4286	0.0360	0.3141	EXP 150 of 150
15D07407	6.1 %	0.241463	0.001161	0.3234	EXP 149 of 150	7.2564	0.0288	0.6965	EXP 150 of 150	1.9850267	0.0260537	0.1397	EXP 150 of 150	169.2888	0.0367	0.9989	EXP 150 of 150	210.9307	0.0430	0.9921	EXP 150 of 150
15D07408	6.5 %	0.198717	0.001089	0.0721	EXP 150 of 150	10.3178	0.0288	0.7875	EXP 150 of 150	2.8713740	0.0265419	0.2820	EXP 150 of 150	241.3223	0.0387	0.9994	EXP 150 of 150	254.3498	0.0439	0.9955	EXP 150 of 150
15D07409	7.0 %	0.153435	0.000991	0.0652	EXP 150 of 150	8.4165	0.0262	0.7751	EXP 150 of 150	2.3724545	0.0248232	0.2285	EXP 150 of 150	199.3541	0.0346	0.9993	EXP 150 of 150	205.5344	0.0455	0.9886	EXP 150 of 150
15D07411	7.6 %	0.159202	0.000925	0.0276	EXP 150 of 150	9.0024	0.0316	0.7060	EXP 150 of 150	2.4955005	0.0270781	0.2269	EXP 150 of 150	213.1339	0.0407	0.9992	EXP 150 of 150	219.1133	0.0389	0.9942	EXP 150 of 150
15D07412	8.4 %	0.215564	0.001130	0.0949	EXP 150 of 150	12.3599	0.0308	0.8316	EXP 150 of 150	3.4454195	0.0256526	0.4150	EXP 149 of 150	290.7086	0.0424	0.9995	EXP 150 of 150	298.3459	0.0438	0.9972	EXP 150 of 150
15D07413	9.4 %	0.340180	0.001259	0.5010	EXP 150 of 150	15.7935	0.0310	0.8980	EXP 150 of 150	4.2752214	0.0273748	0.4944	EXP 150 of 150	354.2095	0.0509	0.9995	EXP 150 of 150	385.8574	0.0506	0.9983	EXP 150 of 150
15D07415	10.5 %	0.405512	0.001451	0.5647	EXP 150 of 150	16.1900	0.0302	0.9005	EXP 150 of 150	4.0121784	0.0261881	0.4294	EXP 149 of 150	332.0042	0.0514	0.9995	EXP 150 of 150	389.7309	0.0566	0.9980	EXP 150 of 150
15D07416	11.7 %	0.455948	0.001462	0.7256	EXP 150 of 150	16.0643	0.0302	0.8967	EXP 150 of 150	3.4288969	0.0262557	0.3464	EXP 150 of 150	286.5506	0.0486	0.9993	EXP 150 of 150	367.1545	0.0526	0.9979	EXP 150 of 150
15D07417	13.1 %	0.955382	0.002380	0.8529	EXP 150 of 150	28.2376	0.0330	0.9567	EXP 150 of 150	4.7812370	0.0250182	0.5162	EXP 150 of 150	383.7444	0.0507	0.9996	EXP 150 of 150	597.5205	0.0634	0.9992	EXP 150 of 150
15D07419	14.7 %	1.455874	0.003007	0.9041	EXP 150 of 150	45.1525	0.0315	0.9846	EXP 150 of 150	5.5861590	0.0270062	0.5951	EXP 150 of 150	431.2882	0.0484	0.9997	EXP 150 of 150	791.3101	0.0619	0.9996	EXP 150 of 150
15D07420	16.5 %	1.878825	0.003051	0.9407	EXP 150 of 150	70.6931	0.0358	0.9921	EXP 150 of 150	6.1017582	0.0261255	0.5818	EXP 150 of 150	471.2616	0.0534	0.9997	EXP 150 of 150	945.3661	0.0795	0.9996	EXP 150 of 150
15D07421	17.7 %	1.417705	0.002651	0.9179	EXP 150 of 150	48.8971	0.0326	0.9865	EXP 149 of 150	4.1012348	0.0268667	0.4342	EXP 150 of 150	321.1876	0.0431	0.9996	EXP 150 of 150	689.8549	0.0615	0.9994	EXP 150 of 150
15D07423	18.5 %	1.020099	0.002421	0.8749	EXP 150 of 150	26.1337	0.0320	0.9536	EXP 150 of 150	2.7045622	0.0242103	0.3539	EXP 150 of 150	210.4586	0.0421	0.9991	EXP 150 of 150	479.2464	0.0534	0.9990	EXP 150 of 150
15D07424	19.5 %	0.738167	0.002060	0.8257	EXP 150 of 150	17.6150	0.0316	0.9050	EXP 150 of 150	1.7680724	0.0281357	0.0882	EXP 150 of 150	142.5743	0.0368	0.9984	EXP 150 of 150	339.3137	0.0528	0.9975	EXP 150 of 150
15D07425	20.5 %	0.590751	0.001843	0.7676	EXP 150 of 150	15.9295	0.0313	0.8851	EXP 150 of 150	1.4269524											







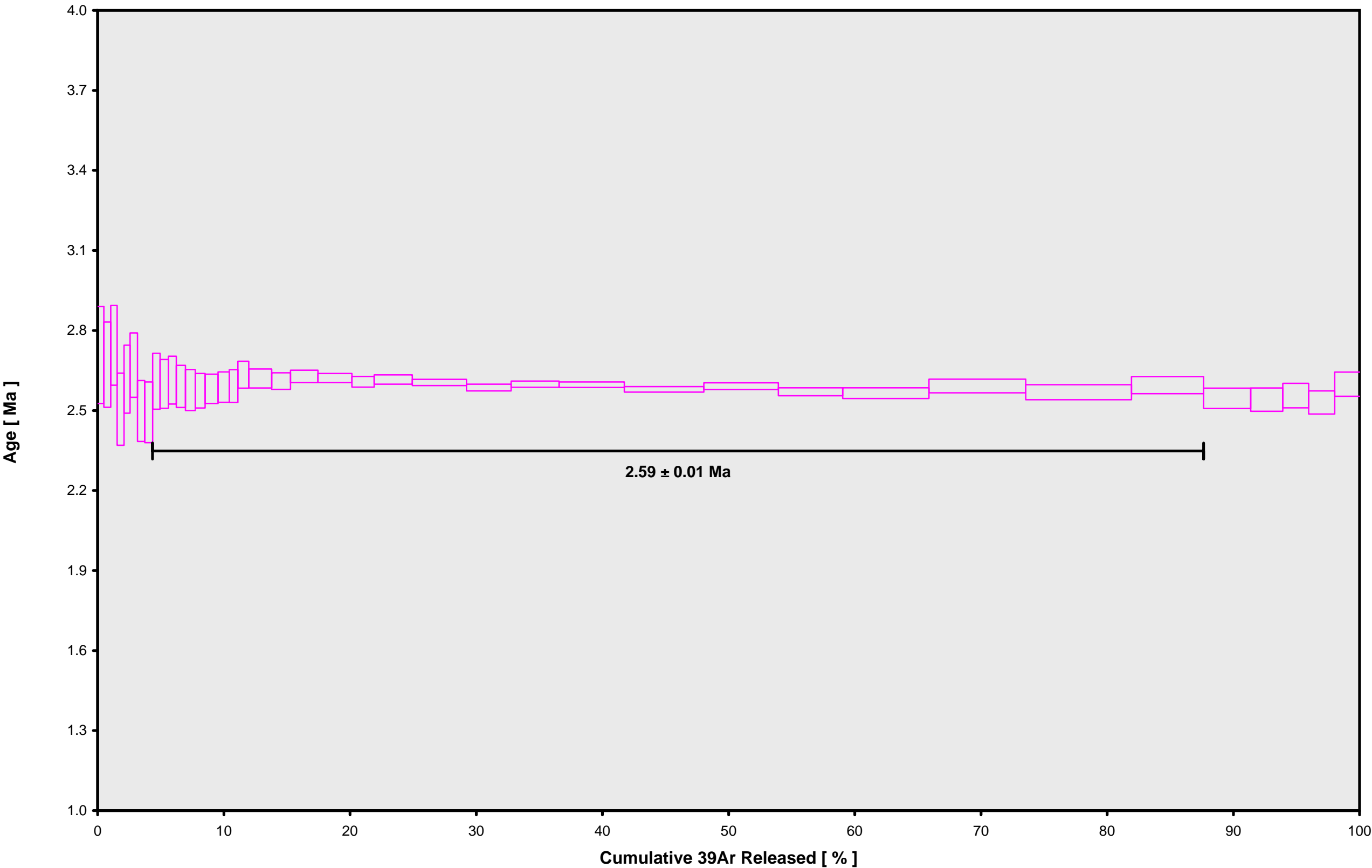
[illegible]



Irradiation Constants	Table 1. Irradiation constants for $^{60}\text{Co}$ and $^{137}\text{Cs}$ sources																											
	40/36(a)	%1 $\sigma$	40/36(c)	%1 $\sigma$	38/36(a)	%1 $\sigma$	38/36(c)	%1 $\sigma$	39/37(ca)	%1 $\sigma$	38/37(ca)	%1 $\sigma$	36/37(ca)	%1 $\sigma$	40/39(k)	%1 $\sigma$	38/39(k)	%1 $\sigma$	36/38(cl)	%1 $\sigma$	K/Ca	%1 $\sigma$	K/Cl	%1 $\sigma$	Ca/Cl	%1 $\sigma$		
15D07375	1.9 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0	
15D07376	2.0 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0	
15D07378	2.1 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0	
15D07379	2.2 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0	
15D07380	2.3 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0	
15D07382	2.4 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0	
15D07383	2.5 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0	
15D07384	2.6 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0	
15D07387	2.7 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0.000264	0	0.43	0	0	0	0	0	
15D07388	2.8 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0	
15D07389	2.9 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0	
15D07391	3.0 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0.000264	0	0.43	0	0	0	0	0	
15D07392	3.2 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0	
15D07393	3.4 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0	
15D07395	3.6 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0	
15D07396	3.8 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0	
15D07397	4.0 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0	
15D07399	4.3 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0	
15D07400	4.6 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0.000264	0	0.43	0	0	0	0	0	
15D07401	4.9 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0	
15D07403	5.2 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0	
15D07404	5.5 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0.000264	0	0.43	0	0	0	0	0	
15D07405	5.8 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0	
15D07407	6.1 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0	
15D07408	6.5 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0	
15D07409	7.0 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0	
15D07411	7.6 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0	
15D07412	8.4 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0	
15D07413	9.4 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0.000264	0	0.43	0	0	0	0	0	
15D07415	10.5 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0	
15D07416	11.7 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0	
15D07417	13.1 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0.000264	0	0.43	0	0	0	0	0	
15D07419	14.7 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0	
15D07420	16.5 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0	
15D07421	17.7 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0.000264	0	0.43	0	0	0	0	0	
15D07423	18.5 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0	
15D07424	19.5 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0	
15D07425	20.5 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0	
15D07427	21.7 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0	
15D07428	22.8 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0	



15D07374.AGE >>> 1180050-1A >>> KERGUELEN | FALLOON (14-PIL-01) PROJECT



### Ar-Ages in Ma

#### WEIGHTED PLATEAU

2.59 ± 0.01

#### TOTAL FUSION

2.59 ± 0.01

#### NORMAL ISOCHRON

2.60 ± 0.01

#### INVERSE ISOCHRON

2.60 ± 0.01

#### MSWD (PROBABILITY)

2.67 (0%)

### Sample Info

Groundmass

Kerguelen Plateau

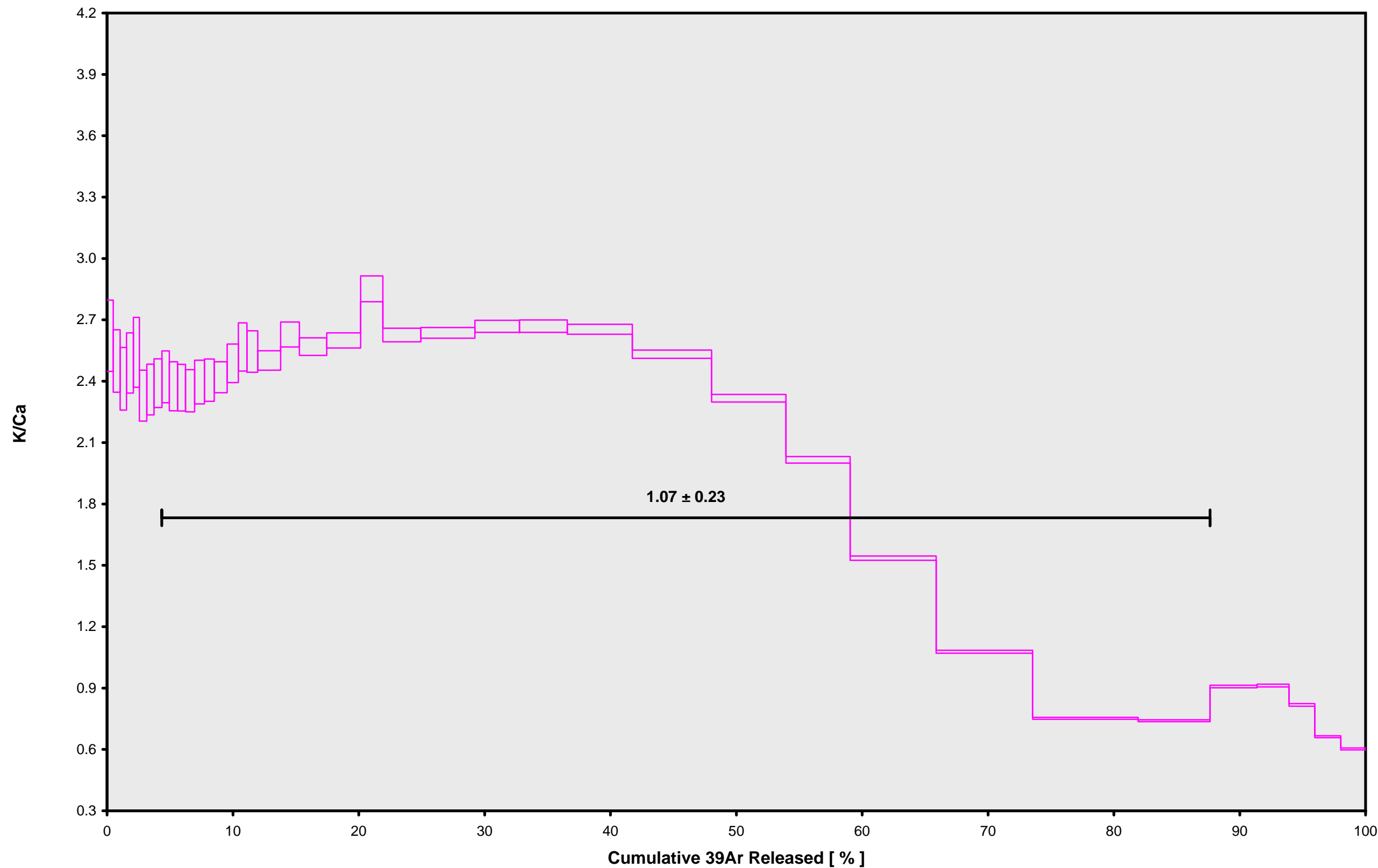
Dan Miggins

IRR = 14-OSU-07 (7B19-14)

J = 0.00179979 ± 0.00000211



15D07374.AGE >>> 1180050-1A >>> KERGUELEN | FALLOON (14-PIL-01) PROJECT



Ar-Ages in Ma

WEIGHTED PLATEAU

2.59 ± 0.01

TOTAL FUSION

2.59 ± 0.01

NORMAL ISOCHRON

2.60 ± 0.01

INVERSE ISOCHRON

2.60 ± 0.01

Sample Info

Groundmass

Kerguelen Plateau

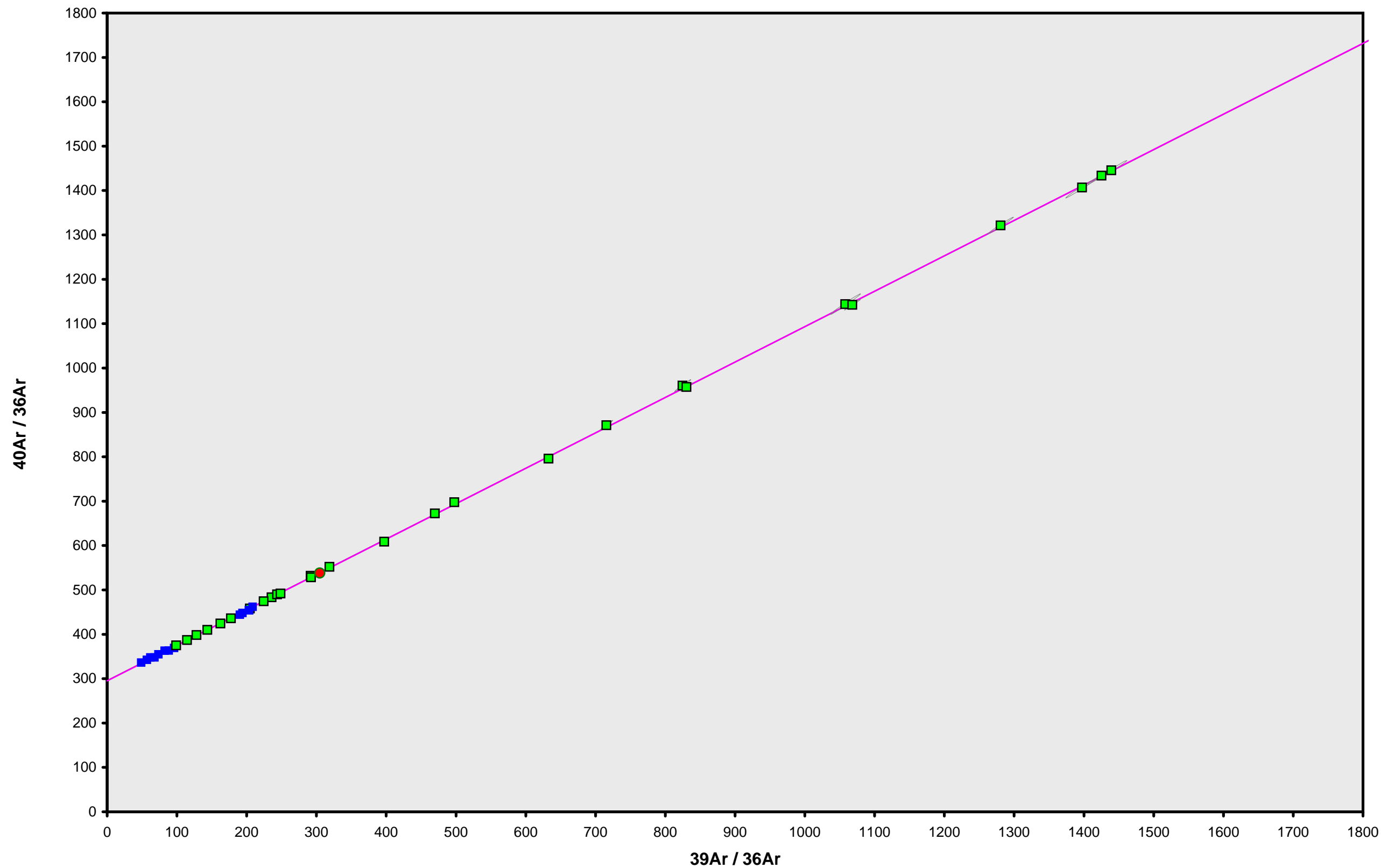
Dan Miggins

IRR = 14-OSU-07 (7B19-14)

J = 0.00179979 ± 0.00000211



15D07374.AGE >>> 1180050-1A >>> KERGUELEN | FALLOON (14-PIL-01) PROJECT



Ar-Ages in Ma

WEIGHTED PLATEAU

2.59 ± 0.01

TOTAL FUSION

2.59 ± 0.01

NORMAL ISOCHRON

2.60 ± 0.01

INVERSE ISOCHRON

2.60 ± 0.01

MSWD (PROBABILITY)

2.74 (0%)

40AR/36AR INTERCEPT

295.1 ± 1.7

Sample Info

Groundmass

Kerguelen Plateau

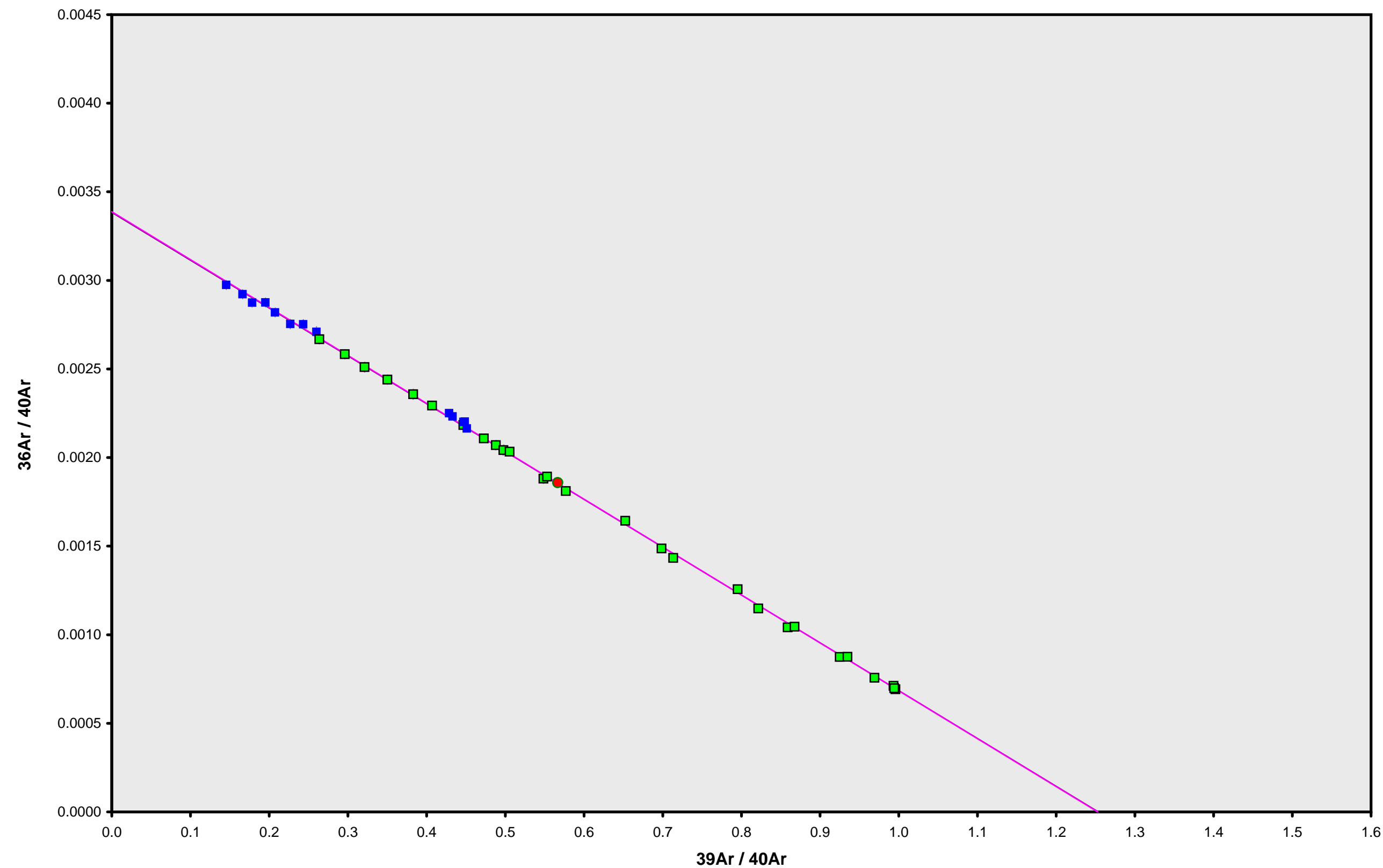
Dan Miggins

IRR = 14-OSU-07 (7B19-14)

J = 0.00179979 ± 0.00000211



15D07374.AGE >>> 1180050-1A >>> KERGUELEN | FALLOON (14-PIL-01) PROJECT



Ar-Ages in Ma

WEIGHTED PLATEAU

$2.59 \pm 0.01$

TOTAL FUSION

$2.59 \pm 0.01$

NORMAL ISOCHRON

$2.60 \pm 0.01$

INVERSE ISOCHRON

$2.60 \pm 0.01$

MSWD (PROBABILITY)

2.75 (0%)

SPREADING FACTOR

58.4%

40AR/36AR INTERCEPT

$295.1 \pm 1.7$

Sample Info

Groundmass

Kerguelen Plateau

Dan Miggins

IRR = 14-OSU-07 (7B19-14)

J =  $0.00179979 \pm 0.00000211$



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
15D01958	1.9 %	1.5303378	13.9546	0.0895258	14.4666	91.997	20.39 ± 0.74	16.90	0.33	0.45 ± 0.02
15D01959	2.0 %	0.5797067	11.7093	0.0136583	10.8208	62.211	18.45 ± 0.47	26.64	0.25	0.40 ± 0.02
15D01961	2.1 %	0.4335803	13.0142	0.0000000	11.5226	62.173	17.32 ± 0.38	32.67	0.26	0.38 ± 0.02
15D01962	2.2 %	0.4203572	16.5205	0.0180281	14.7263	76.839	16.75 ± 0.29	38.22	0.34	0.38 ± 0.01
15D01963	2.3 %	0.3201782	16.5420	0.0320188	14.3163	72.490	16.26 ± 0.26	43.38	0.33	0.37 ± 0.01
15D01965	2.4 %	0.2760487	17.1644	0.0509636	14.8588	76.053	16.43 ± 0.22	48.24	0.34	0.37 ± 0.01
15D01966	2.5 %	0.2258956	16.2828	0.0347060	14.1466	70.666	16.04 ± 0.23	51.42	0.32	0.37 ± 0.01
15D01967	2.6 %	✓ 0.2076574	17.2446	0.0511608	14.8984	74.811	16.12 ± 0.20	54.93	0.34	0.37 ± 0.01
15D01969	2.7 %	✓ 0.1728335	16.6059	0.0217065	14.5233	73.019	16.14 ± 0.19	58.84	0.33	0.38 ± 0.01
15D01970	2.8 %	✓ 0.1598898	17.9289	0.0037311	15.7945	79.326	16.12 ± 0.17	62.66	0.36	0.38 ± 0.01
15D01971	2.9 %	✓ 0.1629107	19.2879	0.0045228	17.2706	85.044	15.81 ± 0.16	63.85	0.39	0.39 ± 0.01
15D01973	3.0 %	✓ 0.1826777	23.2185	0.0464462	20.7457	103.201	15.97 ± 0.13	65.65	0.47	0.38 ± 0.01
15D01974	3.2 %	✓ 0.1910979	27.3698	0.0517027	24.6668	122.705	15.97 ± 0.12	68.47	0.56	0.39 ± 0.01
15D01975	3.4 %	✓ 0.1202232	20.0240	0.0194802	17.7568	88.587	16.02 ± 0.14	71.37	0.41	0.38 ± 0.01
15D01977	3.6 %	✓ 0.1945268	31.6519	0.0638606	28.9615	144.476	16.02 ± 0.10	71.53	0.66	0.39 ± 0.01
15D01978	3.8 %	✓ 0.2040711	37.3266	0.0411058	34.4897	173.318	16.13 ± 0.09	74.18	0.79	0.40 ± 0.01
15D01979	4.0 %	✓ 0.2661915	49.4745	0.0644181	47.3032	235.886	16.01 ± 0.07	74.98	1.08	0.41 ± 0.01
15D01981	4.3 %	✓ 0.2548812	56.0979	0.0000000	54.9309	274.623	16.05 ± 0.07	78.46	1.25	0.42 ± 0.00
15D01982	4.6 %	✓ 0.1806729	48.4698	0.0000000	47.0641	236.714	16.15 ± 0.07	81.58	1.07	0.42 ± 0.01
15D01983	4.9 %	✓ 0.2336591	62.0901	0.0879814	63.4908	317.118	16.04 ± 0.06	82.11	1.45	0.44 ± 0.00
15D01985	5.2 %	✓ 0.2520218	72.8472	0.0354115	77.9502	389.061	16.02 ± 0.05	83.92	1.78	0.46 ± 0.00
15D01986	5.5 %	✓ 0.2926682	92.2221	0.0294549	104.1491	518.111	15.97 ± 0.04	85.68	2.38	0.49 ± 0.00
15D01987	5.8 %	✓ 0.2653023	98.2543	0.0806883	118.1265	587.171	15.96 ± 0.04	88.21	2.70	0.52 ± 0.00
15D01989	6.1 %	0.2237765	96.5756	0.0537151	122.6533	606.485	15.88 ± 0.04	90.15	2.80	0.55 ± 0.00
15D01990	6.5 %	0.1953419	95.0773	0.0473777	127.7747	629.306	15.81 ± 0.03	91.58	2.92	0.58 ± 0.00
15D01991	7.0 %	0.2160799	112.5102	0.0937807	161.6771	793.758	15.76 ± 0.03	92.54	3.69	0.62 ± 0.00
15D01993	7.6 %	0.2402176	148.3522	0.1105616	232.0763	1135.105	15.70 ± 0.03	94.10	5.30	0.67 ± 0.01
15D01994	8.4 %	0.2049595	164.6641	0.1176515	279.9734	1361.683	15.62 ± 0.03	95.72	6.39	0.73 ± 0.01
15D01995	9.4 %	0.2092609	196.2105	0.1030002	362.9353	1758.020	15.55 ± 0.02	96.58	8.28	0.80 ± 0.01
15D01997	10.5 %	0.1957015	198.1173	0.1435327	394.2765	1899.507	15.47 ± 0.02	97.03	9.00	0.86 ± 0.01
15D01998	11.7 %	0.1733511	188.5519	0.1488053	399.5446	1916.081	15.40 ± 0.02	97.38	9.12	0.91 ± 0.01
15D01999	13.1 %	0.1510491	161.0915	0.2442725	353.5479	1687.555	15.33 ± 0.02	97.40	8.07	0.94 ± 0.01
15D02001	14.7 %	0.1604162	154.0617	0.1757770	314.9793	1494.713	15.24 ± 0.02	96.91	7.19	0.88 ± 0.01
15D02002	16.5 %	0.1675557	157.6272	0.2107543	260.7279	1225.381	15.09 ± 0.02	96.10	5.95	0.71 ± 0.01
15D02003	18.3 %	0.1662025	169.8393	0.1872315	204.5475	948.313	14.89 ± 0.03	95.06	4.67	0.52 ± 0.00
15D02005	20.2 %	0.1360655	134.3117	0.1202016	153.8124	707.469	14.77 ± 0.03	94.60	3.51	0.49 ± 0.00
15D02006	22.2 %	0.1012813	144.5962	0.0633909	117.4541	536.900	14.68 ± 0.03	94.70	2.68	0.35 ± 0.00
15D02008	24.5 %	0.0916462	173.7441	0.1065297	99.1960	447.658	14.50 ± 0.03	94.28	2.26	0.25 ± 0.00

Σ 9.7602949 3090.6324 2.7671537 4382.1562 21163.532

Information on Analysis	Results	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD	39Ar(k) (%,n)	K/Ca ± 2σ
Sample = 154-4 Material = Groundmass Location = Kerguelen Plateau Analyst = Dan Miggins Project = KERGUELEN   FALLOON (14- Mass Discrimination Law = LIN Irradiation = 14-OSU-06 (6C10-14) J = 0.00178335 ± 0.00000432 FCT-NM = 28.201 ± 0.023 Ma	Age Plateau Error Mean	4.98715 ± 0.01006 ± 0.20%	16.01 ± 0.08 ± 0.52%	3.41 0%	16.02 16	0.44 ± 0.02
			Full External Error ± 0.37 Analytical Error ± 0.03	1.73 1.8478	2σ Confidence Limit Error Magnification	
	Total Fusion Age	4.82948 ± 0.00228 ± 0.05%	15.51 ± 0.08 ± 0.48%		38	0.61 ± 0.00
			Full External Error ± 0.36 Analytical Error ± 0.01			



Normal Isochron		39(k)/36(a) ± 2σ		40(a+r)/36(a) ± 2σ	r.i.
15D01958	1.9 %	9.45 ± 0.08		355.62 ± 2.60	0.8278
15D01959	2.0 %	18.67 ± 0.21		402.81 ± 3.61	0.7858
15D01961	2.1 %	26.58 ± 0.32		438.89 ± 4.55	0.8561
15D01962	2.2 %	35.03 ± 0.40		478.29 ± 4.92	0.8874
15D01963	2.3 %	44.71 ± 0.56		521.91 ± 6.06	0.9177
15D01965	2.4 %	53.83 ± 0.69		571.01 ± 6.69	0.9110
15D01966	2.5 %	62.62 ± 0.94		608.32 ± 8.57	0.9325
15D01967	2.6 % ✓	71.75 ± 1.06		655.76 ± 9.12	0.9361
15D01969	2.7 % ✓	84.03 ± 1.32		717.98 ± 10.69	0.9396
15D01970	2.8 % ✓	98.78 ± 1.65		791.63 ± 12.71	0.9556
15D01971	2.9 % ✓	106.01 ± 1.75		817.53 ± 13.09	0.9619
15D01973	3.0 % ✓	113.56 ± 1.66		860.43 ± 12.23	0.9664
15D01974	3.2 % ✓	129.08 ± 1.83		937.61 ± 12.95	0.9711
15D01975	3.4 % ✓	147.70 ± 2.92		1032.35 ± 19.98	0.9737
15D01977	3.6 % ✓	148.88 ± 2.18		1038.21 ± 14.92	0.9765
15D01978	3.8 % ✓	169.01 ± 2.27		1144.80 ± 15.07	0.9795
15D01979	4.0 % ✓	177.70 ± 2.18		1181.65 ± 14.30	0.9840
15D01981	4.3 % ✓	215.52 ± 2.86		1372.95 ± 18.01	0.9877
15D01982	4.6 % ✓	260.49 ± 4.07		1605.68 ± 24.86	0.9896
15D01983	4.9 % ✓	271.72 ± 3.76		1652.68 ± 22.69	0.9899
15D01985	5.2 % ✓	309.30 ± 3.87		1839.26 ± 22.82	0.9900
15D01986	5.5 % ✓	355.86 ± 4.34		2065.80 ± 24.97	0.9909
15D01987	5.8 % ✓	445.25 ± 5.10		2508.71 ± 28.47	0.9901
15D01989	6.1 %	548.11 ± 7.92		3005.73 ± 43.17	0.9938
15D01990	6.5 %	654.11 ± 9.94		3517.06 ± 53.19	0.9945
15D01991	7.0 %	748.23 ± 10.58		3968.95 ± 55.80	0.9941
15D01993	7.6 %	966.11 ± 13.18		5020.82 ± 68.10	0.9940
15D01994	8.4 %	1365.99 ± 22.22		6939.17 ± 112.46	0.9959
15D01995	9.4 %	1734.37 ± 28.05		8696.59 ± 140.08	0.9960
15D01997	10.5 %	2014.68 ± 33.12		10001.64 ± 163.78	0.9961
15D01998	11.7 %	2304.83 ± 41.55		11348.68 ± 203.92	0.9968
15D01999	13.1 %	2340.62 ± 44.93		11467.73 ± 219.50	0.9972
15D02001	14.7 %	1963.51 ± 36.34		9613.22 ± 177.39	0.9969
15D02002	16.5 %	1556.07 ± 25.80		7608.77 ± 125.67	0.9961
15D02003	18.3 %	1230.71 ± 22.04		6001.27 ± 107.09	0.9965
15D02005	20.2 %	1130.43 ± 21.97		5494.98 ± 106.49	0.9968
15D02006	22.2 %	1159.68 ± 26.93		5596.58 ± 129.67	0.9975
15D02008	24.5 %	1082.38 ± 28.27		5180.13 ± 135.03	0.9979

Results	40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD
Normal Isochron	298.46 ± 4.64	4.97510 ± 0.02086	15.97 ± 0.10	3.19
Error Chron	± 1.56%	± 0.42%	± 0.64%	0%
		Full External Error ± 0.37		
		Analytical Error ± 0.07		
Statistics	2σ Confidence Limit	1.76	Convergence	0.000048036931
	Error Magnification	1.7860	Number of Iterations	18
	Number of Data Points	16	Calculated Line	Weighted York-2



Inverse Isochron		39(k)/40(a+r) ± 2σ		36(a)/40(a+r) ± 2σ	r.i.
15D01958	1.9 %	0.0265826 ± 0.0001315		0.00281203 ± 0.00002058	0.0035
15D01959	2.0 %	0.0463390 ± 0.0003248		0.00248253 ± 0.00002226	0.0088
15D01961	2.1 %	0.0605512 ± 0.0003760		0.00227846 ± 0.00002361	0.0126
15D01962	2.2 %	0.0732453 ± 0.0003892		0.00209076 ± 0.00002152	0.0122
15D01963	2.3 %	0.0856732 ± 0.0004275		0.00191605 ± 0.00002225	0.0177
15D01965	2.4 %	0.0942665 ± 0.0004963		0.00175129 ± 0.00002053	0.0181
15D01966	2.5 %	0.1029455 ± 0.0005576		0.00164386 ± 0.00002316	0.0190
15D01967	2.6 % ✓	0.1094072 ± 0.0005677		0.00152494 ± 0.00002121	0.0211
15D01969	2.7 % ✓	0.1170376 ± 0.0006297		0.00139280 ± 0.00002074	0.0228
15D01970	2.8 % ✓	0.1247857 ± 0.0006140		0.00126322 ± 0.00002029	0.0219
15D01971	2.9 % ✓	0.1296748 ± 0.0005867		0.00122320 ± 0.00001959	0.0223
15D01973	3.0 % ✓	0.1319850 ± 0.0004965		0.00116220 ± 0.00001652	0.0211
15D01974	3.2 % ✓	0.1376692 ± 0.0004649		0.00106654 ± 0.00001473	0.0193
15D01975	3.4 % ✓	0.1430697 ± 0.0006450		0.00096866 ± 0.00001874	0.0202
15D01977	3.6 % ✓	0.1434028 ± 0.0004529		0.00096320 ± 0.00001384	0.0162
15D01978	3.8 % ✓	0.1476312 ± 0.0003990		0.00087351 ± 0.00001150	0.0151
15D01979	4.0 % ✓	0.1503857 ± 0.0003284		0.00084627 ± 0.00001024	0.0125
15D01981	4.3 % ✓	0.1569722 ± 0.0003261		0.00072836 ± 0.00000956	0.0098
15D01982	4.6 % ✓	0.1622324 ± 0.0003654		0.00062279 ± 0.00000964	0.0100
15D01983	4.9 % ✓	0.1644139 ± 0.0003225		0.00060508 ± 0.00000831	0.0079
15D01985	5.2 % ✓	0.1681652 ± 0.0002977		0.00054370 ± 0.00000675	0.0072
15D01986	5.5 % ✓	0.1722626 ± 0.0002828		0.00048407 ± 0.00000585	0.0054
15D01987	5.8 % ✓	0.1774823 ± 0.0002847		0.00039861 ± 0.00000452	0.0047
15D01989	6.1 %	0.1823540 ± 0.0002935		0.00033270 ± 0.00000478	0.0038
15D01990	6.5 %	0.1859815 ± 0.0002951		0.00028433 ± 0.00000430	0.0038
15D01991	7.0 %	0.1885207 ± 0.0002891		0.00025196 ± 0.00000354	0.0029
15D01993	7.6 %	0.1924205 ± 0.0002868		0.00019917 ± 0.00000270	0.0017
15D01994	8.4 %	0.1968527 ± 0.0002884		0.00014411 ± 0.00000234	0.0012
15D01995	9.4 %	0.1994308 ± 0.0002887		0.00011499 ± 0.00000185	0.0009
15D01997	10.5 %	0.2014352 ± 0.0002906		0.00009998 ± 0.00000164	0.0008
15D01998	11.7 %	0.2030922 ± 0.0002930		0.00008812 ± 0.00000158	0.0007
15D01999	13.1 %	0.2041045 ± 0.0002952		0.00008720 ± 0.00000167	0.0009
15D02001	14.7 %	0.2042514 ± 0.0002963		0.00010402 ± 0.00000192	0.0010
15D02002	16.5 %	0.2045095 ± 0.0003006		0.00013143 ± 0.00000217	0.0013
15D02003	18.3 %	0.2050755 ± 0.0003076		0.00016663 ± 0.00000297	0.0017
15D02005	20.2 %	0.2057205 ± 0.0003189		0.00018198 ± 0.00000353	0.0022
15D02006	22.2 %	0.2072127 ± 0.0003369		0.00017868 ± 0.00000414	0.0032
15D02008	24.5 %	0.2089482 ± 0.0003546		0.00019305 ± 0.00000503	0.0034

Results	40(a)/36(a) ± 2σ		40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD
Inverse Isochron Error Chron	298.74 ± 4.68 ± 1.57%		4.97432 ± 0.02104 ± 0.42%	15.97 ± 0.10 ± 0.64%	3.22 0%
			Full External Error ± 0.37 Analytical Error ± 0.07		
Statistics	2σ Confidence Limit	1.76	Convergence	0.0003373051	
	Error Magnification	1.7943	Number of Iterations	2	
	Number of Data Points	16	Calculated Line	Weighted York-2	
	Spreading Factor	33.9%			







OSU Argon Geochronology Lab																																	
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
15D01958	1.9 %	1.5303378	0.37	0.0000000	0.00	0.0036840	1.84	0.0000123	41.94	13.9546	1.84	0.2860201	0.37	0.0000000	0.00	0.164629	0.25	0.0001940	1.84	0.0895258	41.95	14.4666	0.25	0.0093914	1.84	91.997	1.80	452.2148	0.37	0.0000000	0.00	0.0146112	0.25
15D01959	2.0 %	0.5797067	0.45	0.0000000	0.00	0.0030912	2.15	0.0000019	281.34	11.7093	2.15	0.1083472	0.45	0.0000000	0.00	0.123141	0.35	0.0001628	2.15	0.0136583	281.34	10.8208	0.35	0.0078803	2.15	62.211	1.24	171.3033	0.45	0.0000000	0.00	0.0109290	0.35
15D01961	2.1 %	0.4335803	0.52	0.0000000	0.00	0.0034358	1.98	0.0000000	0.00	13.0142	1.98	0.0810362	0.52	0.0000000	0.00	0.131128	0.31	0.0001809	1.98	0.0000000	0.00	11.5226	0.31	0.0087586	1.98	62.173	1.07	128.1230	0.52	0.0000000	0.00	0.0116379	0.31
15D01962	2.2 %	0.4203572	0.51	0.0000000	0.00	0.0043614	1.59	0.0000025	215.54	16.5205	1.59	0.0785648	0.51	0.0000000	0.00	0.167585	0.26	0.0002296	1.59	0.0180281	215.54	14.7263	0.26	0.0111183	1.59	76.839	0.84	124.2156	0.51	0.0000000	0.00	0.0148735	0.26
15D01963	2.3 %	0.3201782	0.58	0.0000000	0.00	0.0043671	1.53	0.0000044	115.93	16.5420	1.53	0.0598413	0.58	0.0000000	0.00	0.162919	0.24	0.0002299	1.53	0.0320188	115.93	14.3163	0.24	0.0111328	1.53	72.490	0.76	94.6126	0.58	0.0000000	0.00	0.0144594	0.24
15D01965	2.4 %	0.2760487	0.58	0.0000000	0.00	0.0045314	1.48	0.0000070	80.91	17.1644	1.48	0.0515935	0.58	0.0000000	0.00	0.169093	0.26	0.0002386	1.48	0.0509636	80.92	14.8588	0.26	0.0115516	1.48	76.053	0.64	81.5724	0.58	0.0000000	0.00	0.0150074	0.26
15D01966	2.5 %	0.2258956	0.70	0.0000000	0.00	0.0042987	1.51	0.0000048	111.63	16.2828	1.51	0.0422199	0.70	0.0000000	0.00	0.160988	0.26	0.0002263	1.51	0.0347060	111.64	14.1466	0.26	0.0109583	1.51	70.666	0.67	66.7522	0.70	0.0000000	0.00	0.0142880	0.26
15D01967	2.6 %	✓ 0.2076574	0.69	0.0000000	0.00	0.0045526	1.47	0.0000071	74.77	17.2446	1.47	0.0388112	0.69	0.0000000	0.00	0.169544	0.25	0.0002397	1.47	0.0511608	74.78	14.8984	0.25	0.0116056	1.47	74.811	0.58	61.3628	0.69	0.0000000	0.00	0.0150474	0.25
15D01969	2.7 %	✓ 0.1728335	0.74	0.0000000	0.00	0.0043839	1.50	0.0000030	188.03	16.6059	1.50	0.0323026	0.74	0.0000000	0.00	0.165275	0.26	0.0002308	1.50	0.0217065	188.04	14.5233	0.26	0.0111757	1.50	73.019	0.53	51.0723	0.74	0.0000000	0.00	0.0146685	0.26
15D01970	2.8 %	✓ 0.1598898	0.80	0.0000000	0.00	0.0047332	1.41	0.0000005	1007.68	17.9289	1.41	0.0298834	0.80	0.0000000	0.00	0.179742	0.24	0.0002492	1.41	0.0037311	1007.68	15.7945	0.24	0.0120662	1.41	79.326	0.49	47.2474	0.80	0.0000000	0.00	0.0159525	0.24
15D01971	2.9 %	✓ 0.1629107	0.80	0.0000000	0.00	0.0050920	1.33	0.0000006	832.28	19.2879	1.33	0.0304480	0.80	0.0000000	0.00	0.196539	0.22	0.0002681	1.33	0.0045228	832.28	17.2706	0.22	0.0129808	1.33	85.044	0.46	48.1401	0.80	0.0000000	0.00	0.0174433	0.22
15D01973	3.0 %	✓ 0.1826777	0.71	0.0000000	0.00	0.0061297	1.10	0.0000064	82.29	23.2185	1.10	0.0341425	0.71	0.0000000	0.00	0.236086	0.18	0.0003227	1.10	0.0464462	82.29	20.7457	0.18	0.0156260	1.10	103.201	0.38	53.9813	0.71	0.0000000	0.00	0.0209531	0.18
15D01974	3.2 %	✓ 0.1910979	0.69	0.0000000	0.00	0.0072256	0.95	0.0000071	71.44	27.3698	0.95	0.0357162	0.69	0.0000000	0.00	0.280709	0.16	0.0003804	0.95	0.0517027	71.44	24.6668	0.16	0.0184199	0.95	122.705	0.32	56.4694	0.69	0.0000000	0.00	0.0249135	0.16
15D01975	3.4 %	✓ 0.1202232	0.97	0.0000000	0.00	0.0052863	1.27	0.0000027	199.40	20.0240	1.27	0.0224697	0.97	0.0000000	0.00	0.202072	0.22	0.0002783	1.27	0.0194802	199.40	17.7568	0.22	0.0134762	1.27	88.587	0.40	35.5260	0.97	0.0000000	0.00	0.0179343	0.22
15D01977	3.6 %	✓ 0.1945268	0.72	0.0000000	0.00	0.0083561	0.86	0.0000088	59.88	31.6519	0.86	0.0363571	0.72	0.0000000	0.00	0.329581	0.15	0.0004400	0.86	0.0638606	59.88	28.9615	0.15	0.0213017	0.86	144.476	0.29	57.4827	0.72	0.0000000	0.00	0.0292511	0.15
15D01978	3.8 %	✓ 0.2040711	0.66	0.0000000	0.00	0.0098542	0.73	0.0000057	95.45	37.3266	0.73	0.0381409	0.66	0.0000000	0.00	0.392493	0.13	0.0005188	0.73	0.0411058	95.46	34.4897	0.13	0.0251208	0.73	173.318	0.23	60.3030	0.66	0.0000000	0.00	0.0348346	0.13
15D01979	4.0 %	✓ 0.2661915	0.60	0.0000000	0.00	0.0130613	0.62	0.0000089	58.33	49.4745	0.62	0.0497512	0.60	0.0000000	0.00	0.538310	0.11	0.0006877	0.62	0.0644181	58.34	47.3032	0.11	0.0332963	0.62	235.886	0.21	78.6596	0.60	0.0000000	0.00	0.0477762	0.11
15D01981	4.3 %	✓ 0.2548812	0.66	0.0000000	0.00	0.0148099	0.56	0.0000000	0.00	56.0979	0.56	0.0476373	0.66	0.0000000	0.00	0.625113	0.10	0.0007798	0.56	0.0000000	0.00	54.9309	0.10	0.0377539	0.56	274.623	0.18	75.3174	0.66	0.0000000	0.00	0.0554802	0.10
15D01982	4.6 %	✓ 0.1806729	0.77	0.0000000	0.00	0.0127960	0.61	0.0000000	0.00	48.4698	0.61	0.0337678	0.77	0.0000000	0.00	0.535589	0.11	0.0006737	0.61	0.0000000	0.00	47.0641	0.11	0.0326202	0.61	236.714	0.18	53.3888	0.77	0.0000000	0.00	0.0475347	0.11
15D01983	4.9 %	✓ 0.2336591	0.69	0.0000000	0.00	0.0163918	0.53	0.0000122	44.13	62.0901	0.53	0.0436709	0.69	0.0000000	0.00	0.722525	0.10	0.0008631	0.53	0.0879814	44.14	63.4908	0.10	0.0417867	0.53	317.118	0.15	69.0463	0.69	0.0000000	0.00	0.0641257	0.10
15D01985	5.2 %	✓ 0.2520218	0.62	0.0000000	0.00	0.0192317	0.45	0.0000049	107.46	72.8472	0.45	0.0471029	0.62	0.0000000	0.00	0.887074	0.09	0.0010126	0.45	0.0354115	107.46	77.9502	0.09	0.0490262	0.45	389.061	0.12	74.4725	0.62	0.0000000	0.00	0.0787297	0.09
15D01986	5.5 %	✓ 0.2926682	0.60	0.0000000	0.00	0.0243466	0.43	0.0000041	129.37	92.2221	0.43	0.0546997	0.60	0.0000000	0.00	1.185216	0.08	0.0012819	0.43	0.0294549	129.37	104.1491	0.08	0.0620655	0.43	518.111	0.10	86.4835	0.60	0.0000000	0.00	0.1051906	0.08
15D01987	5.8 %	✓ 0.2653023	0.57	0.0000000	0.00	0.0259391	0.41	0.0000112	46.88	98.2543	0.41	0.0495850	0.57	0.0000000	0.00	1.344280	0.08	0.0013657	0.41	0.0806883	46.89	118.1265	0.08	0.0661251	0.41	587.171	0.08	78.3968	0.57	0.0000000	0.00	0.1193078	0.08
15D01989	6.1 %	0.2237765	0.72	0.0000000	0.00	0.0254960	0.41	0.0000074	72.80	96.5756	0.41	0.0418238	0.72	0.0000000	0.00	1.395794	0.08	0.0013424	0.41	0.0537151	72.81	122.6533	0.08	0.0649954	0.41	606.485	0.08	66.1260	0.72	0.0000000	0.00	0.1238798	0.08
15D01990	6.5 %	0.1953419	0.76	0.0000000	0.00	0.0251004	0.43	0.0000066	80.76	95.0773	0.43	0.0365094	0.76	0.0000000	0.00	1.454076	0.08	0.0013216	0.43	0.0473777	80.76	127.7747	0.08	0.0639871	0.43	629.306	0.07	57.7235	0.76	0.0000000	0.00	0.1290525	0.08
15D01991	7.0 %	0.2160799	0.70	0.0000000	0.00	0.0297027	0.39	0.0000130	41.04	112.5102	0.39	0.0403853	0.70	0.0000000	0.00	1.839886	0.08	0.0015639	0.39	0.0937807	41.05	161.6771	0.08	0.0757194	0.39	793.758	0.06	63.8516	0.70	0.0000000	0.00	0.1632939	0.08
15D01993	7.6 %	0.2402176	0.68	0.0000000	0.00	0.0391650	0.37	0.0000153	35.16	148.3522	0.37	0.0448967	0.68	0.0000000	0.00	2.641028	0.07	0.0020621	0.37	0.1105616	35.17	232.0763	0.07	0.0998410	0.37	1135.105	0.04	70.9843	0.68	0.0000000	0.00	0.2343971	0.07
15D01994	8.4 %	0.2049595	0.81	0.0000000	0.00	0.0434713	0.36	0.0000163	33.52	164.6641	0.36	0.0383069	0.81	0.0000000	0.00	3.186097	0.07	0.0022888	0.36	0.1176515	33.53	279.9734	0.07	0.1108189	0.36	1361.683	0.04	60.5655	0.81	0.0000000	0.00	0.2827731	0.07
15D01995	9.4 %	0.2092609	0.81	0.0000000	0.00	0.0517996	0.35	0.0000143	37.28	196.2105	0.35	0.0391109	0.81	0.0000000	0.00	4.130204	0.07	0.0027273	0.35	0.1030002	37.29	362.9353	0.07	0.1320497	0.35	1758.020	0.03	61.8366	0.81	0.0000000	0.00	0.3665647	0.07
15D01997	10.5 %	0.1957015	0.82	0.0000000	0.00	0.0523030	0.35	0.0000199	26.67	198.1173	0.35	0.0365766	0.82	0.0000000	0.00	4.486866	0.07	0.0027538	0.35	0.1435327	26.68	394.2765	0.07	0.1333329	0.35	1899.507	0.03	57.8298	0.82	0.0000000	0.00	0.3982192	0.07
15D01998	11.7 %	0.1733511	0.90</																														



Additional Parameters		40Ar/39Ar	1σ	37Ar/39Ar	1σ	36Ar/39Ar	1σ	Time (days)	37Ar (decay)	39Ar (decay)	40Ar (moles)
15D01958	1.9 %	37.595225	0.092954	0.963983	0.017856	0.105971	0.000466	84.897	5.362112	1.00060010	2.612E-11
15D01959	2.0 %	21.565420	0.075518	1.081318	0.023503	0.053820	0.000304	84.908	5.363215	1.00060017	1.121E-11
15D01961	2.1 %	16.503405	0.051195	1.128590	0.022583	0.037898	0.000226	84.926	5.365202	1.00060030	9.135E-12
15D01962	2.2 %	13.643467	0.036220	1.120992	0.018116	0.028819	0.000165	84.936	5.366232	1.00060037	9.651E-12
15D01963	2.3 %	11.664200	0.029081	1.154571	0.017883	0.022652	0.000141	84.946	5.367263	1.00060044	8.022E-12
15D01965	2.4 %	10.600986	0.027887	1.154269	0.017331	0.018869	0.000119	84.964	5.369177	1.00060057	7.567E-12
15D01966	2.5 %	9.707369	0.026268	1.150115	0.017673	0.016260	0.000120	84.974	5.370209	1.00060064	6.597E-12
15D01967	2.6 %	✓ 9.134063	0.023679	1.156580	0.017288	0.014233	0.000103	84.983	5.371166	1.00060070	6.537E-12
15D01969	2.7 %	✓ 8.538703	0.022954	1.142515	0.017375	0.012193	0.000094	85.001	5.373082	1.00060083	5.957E-12
15D01970	2.8 %	✓ 8.008629	0.019690	1.134266	0.016247	0.010415	0.000085	85.010	5.374040	1.00060089	6.076E-12
15D01971	2.9 %	✓ 7.706815	0.017421	1.115970	0.015011	0.009720	0.000078	85.019	5.374999	1.00060095	6.394E-12
15D01973	3.0 %	✓ 7.571924	0.014232	1.118355	0.012503	0.009095	0.000064	85.036	5.376842	1.00060108	7.546E-12
15D01974	3.2 %	✓ 7.259380	0.012248	1.108751	0.010669	0.008034	0.000055	85.045	5.377801	1.00060114	8.602E-12
15D01975	3.4 %	✓ 6.985308	0.015735	1.126828	0.014533	0.007063	0.000067	85.053	5.378686	1.00060120	5.958E-12
15D01977	3.6 %	✓ 6.969249	0.010998	1.092092	0.009569	0.007000	0.000049	85.071	5.380531	1.00060132	9.695E-12
15D01978	3.8 %	✓ 6.769715	0.009141	1.081467	0.008051	0.006198	0.000040	85.080	5.381491	1.00060139	1.122E-11
15D01979	4.0 %	✓ 6.645900	0.007252	1.045167	0.006543	0.005900	0.000035	85.088	5.382376	1.00060145	1.510E-11
15D01981	4.3 %	✓ 6.367190	0.006609	1.020544	0.005800	0.004906	0.000031	85.106	5.384222	1.00060157	1.680E-11
15D01982	4.6 %	✓ 6.160737	0.006933	1.029155	0.006354	0.004108	0.000030	85.115	5.385183	1.00060163	1.393E-11
15D01983	4.9 %	✓ 6.079221	0.005958	0.977296	0.005237	0.003936	0.000025	85.123	5.386069	1.00060169	1.854E-11
15D01985	5.2 %	✓ 5.943806	0.005257	0.933947	0.004313	0.003478	0.000020	85.140	5.387916	1.00060181	2.225E-11
15D01986	5.5 %	✓ 5.802644	0.004761	0.884954	0.003852	0.003042	0.000017	85.149	5.388877	1.00060188	2.903E-11
15D01987	5.8 %	✓ 5.632220	0.004515	0.831306	0.003473	0.002464	0.000013	85.158	5.389764	1.00060194	3.195E-11
15D01989	6.1 %	5.481946	0.004409	0.786970	0.003323	0.002031	0.000013	85.175	5.391613	1.00060206	3.229E-11
15D01990	6.5 %	5.375198	0.004263	0.743729	0.003217	0.001724	0.000012	85.184	5.392574	1.00060212	3.298E-11
15D01991	7.0 %	5.302982	0.004065	0.695569	0.002760	0.001520	0.000009	85.192	5.393462	1.00060218	4.117E-11
15D01993	7.6 %	5.195726	0.003870	0.638964	0.002397	0.001203	0.000007	85.210	5.395312	1.00060230	5.790E-11
15D01994	8.4 %	5.078941	0.003719	0.587909	0.002137	0.000887	0.000006	85.219	5.396274	1.00060237	6.828E-11
15D01995	9.4 %	5.013457	0.003627	0.540425	0.001925	0.000719	0.000005	85.227	5.397162	1.00060243	8.737E-11
15D01997	10.5 %	4.963707	0.003580	0.502313	0.001791	0.000629	0.000004	85.244	5.399013	1.00060255	9.397E-11
15D01998	11.7 %	4.923317	0.003551	0.471767	0.001682	0.000558	0.000004	85.253	5.399902	1.00060261	9.445E-11
15D01999	13.1 %	4.898958	0.003542	0.455503	0.001671	0.000547	0.000004	85.262	5.400865	1.00060267	8.316E-11
15D02001	14.7 %	4.895327	0.003550	0.488956	0.001793	0.000638	0.000005	85.279	5.402718	1.00060279	7.404E-11
15D02002	16.5 %	4.888769	0.003592	0.604320	0.002229	0.000802	0.000005	85.288	5.403681	1.00060286	6.121E-11
15D02003	18.3 %	4.874540	0.003653	0.829853	0.003009	0.001031	0.000007	85.297	5.404571	1.00060292	4.789E-11
15D02005	20.2 %	4.859118	0.003764	0.872705	0.003338	0.001115	0.000009	85.315	5.406498	1.00060304	3.590E-11
15D02006	22.2 %	4.822974	0.003918	1.230068	0.004611	0.001186	0.000010	85.324	5.407463	1.00060311	2.721E-11
15D02008	24.5 %	4.781249	0.004052	1.749460	0.006416	0.001385	0.000012	85.341	5.409317	1.00060323	2.279E-11



Procedure Blanks		36Ar [fA]	1σ	37Ar [fA]	1σ	38Ar [fA]	1σ	39Ar [fA]	1σ	40Ar [fA]	1σ
15D01958	1.9 %	0.0092012	0.0005732	0.0110357	0.0338245	0.0643890	0.0268936	0.0053763	0.0246853	2.6073124	0.0742115
15D01959	2.0 %	0.0091929	0.0005732	0.0101283	0.0338245	0.0753113	0.0268936	0.0041184	0.0246853	2.6057828	0.0742115
15D01961	2.1 %	0.0091780	0.0005732	0.0084950	0.0338245	0.0894364	0.0268936	0.0018542	0.0246853	2.6030296	0.0742115
15D01962	2.2 %	0.0091703	0.0005732	0.0076480	0.0338245	0.0943721	0.0268936	0.0006802	0.0246853	2.6016019	0.0742115
15D01963	2.3 %	0.0091626	0.0005732	0.0068011	0.0338245	0.0979359	0.0268936	0.0004939	0.0246853	2.6001743	0.0742115
15D01965	2.4 %	0.0091482	0.0005732	0.0052283	0.0338245	0.1015354	0.0268936	0.0026742	0.0246853	2.5975230	0.0742115
15D01966	2.5 %	0.0091405	0.0005732	0.0043813	0.0338245	0.1021578	0.0268936	0.0038482	0.0246853	2.5960954	0.0742115
15D01967	2.6 %	0.0091333	0.0005732	0.0035949	0.0338245	0.1020865	0.0268936	0.0049384	0.0246853	2.5947697	0.0742115
15D01969	2.7 %	0.0091190	0.0005732	0.0020221	0.0338245	0.1005256	0.0268936	0.0071188	0.0246853	2.5921184	0.0742115
15D01970	2.8 %	0.0091119	0.0005732	0.0012356	0.0338245	0.0992391	0.0268936	0.0082089	0.0246853	2.5907928	0.0742115
15D01971	2.9 %	0.0091047	0.0005732	0.0004492	0.0338245	0.0977370	0.0268936	0.0092991	0.0246853	2.5894671	0.0742115
15D01973	3.0 %	0.0090909	0.0005732	0.00010631	0.0338245	0.0945342	0.0268936	0.0113956	0.0246853	2.5869178	0.0742115
15D01974	3.2 %	0.0090837	0.0005732	0.0018496	0.0338245	0.0928374	0.0268936	0.0124858	0.0246853	2.5855921	0.0742115
15D01975	3.4 %	0.0090771	0.0005732	0.0025755	0.0338245	0.0913196	0.0268936	0.0134921	0.0246853	2.5843684	0.0742115
15D01977	3.6 %	0.0090633	0.0005732	0.0040879	0.0338245	0.0884734	0.0268936	0.0155886	0.0246853	2.5818191	0.0742115
15D01978	3.8 %	0.0090562	0.0005732	0.0048743	0.0338245	0.0872323	0.0268936	0.0166788	0.0246853	2.5804935	0.0742115
15D01979	4.0 %	0.0090496	0.0005732	0.0056002	0.0338245	0.0862634	0.0268936	0.0176851	0.0246853	2.5792698	0.0742115
15D01981	4.3 %	0.0090358	0.0005732	0.0071126	0.0338245	0.0848458	0.0268936	0.0197816	0.0246853	2.5767205	0.0742115
15D01982	4.6 %	0.0090286	0.0005732	0.0078990	0.0338245	0.0844407	0.0268936	0.0208717	0.0246853	2.5753948	0.0742115
15D01983	4.9 %	0.0090220	0.0005732	0.0086249	0.0338245	0.0842643	0.0268936	0.0218780	0.0246853	2.5741711	0.0742115
15D01985	5.2 %	0.0090082	0.0005732	0.0101373	0.0338245	0.0844511	0.0268936	0.0239745	0.0246853	2.5716218	0.0742115
15D01986	5.5 %	0.0090010	0.0005732	0.0109237	0.0338245	0.0847965	0.0268936	0.0250647	0.0246853	2.5702961	0.0742115
15D01987	5.8 %	0.0089944	0.0005732	0.0116497	0.0338245	0.0852260	0.0268936	0.0260710	0.0246853	2.5690725	0.0742115
15D01989	6.1 %	0.0089807	0.0005732	0.0131620	0.0338245	0.0862971	0.0268936	0.0281675	0.0246853	2.5665231	0.0742115
15D01990	6.5 %	0.0089735	0.0005732	0.0139484	0.0338245	0.0868413	0.0268936	0.0292577	0.0246853	2.5651975	0.0742115
15D01991	7.0 %	0.0089669	0.0005732	0.0146744	0.0338245	0.0872601	0.0268936	0.0302640	0.0246853	2.5639738	0.0742115
15D01993	7.6 %	0.0089531	0.0005732	0.0161867	0.0338245	0.0875991	0.0268936	0.0323605	0.0246853	2.5614245	0.0742115
15D01994	8.4 %	0.0089459	0.0005732	0.0169732	0.0338245	0.0873247	0.0268936	0.0334507	0.0246853	2.5600988	0.0742115
15D01995	9.4 %	0.0089393	0.0005732	0.0176991	0.0338245	0.0866860	0.0268936	0.0344570	0.0246853	2.5588751	0.0742115
15D01997	10.5 %	0.0089255	0.0005732	0.0192115	0.0338245	0.0837806	0.0268936	0.0365535	0.0246853	2.5563258	0.0742115
15D01998	11.7 %	0.0089189	0.0005732	0.0199374	0.0338245	0.0814324	0.0268936	0.0375598	0.0246853	2.5551021	0.0742115
15D01999	13.1 %	0.0089117	0.0005732	0.0207238	0.0338245	0.0780309	0.0268936	0.0386500	0.0246853	2.5537765	0.0742115
15D02001	14.7 %	0.0088980	0.0005732	0.0222362	0.0338245	0.0684728	0.0268936	0.0407464	0.0246853	2.5512271	0.0742115
15D02002	16.5 %	0.0088908	0.0005732	0.0230226	0.0338245	0.0616447	0.0268936	0.0418366	0.0246853	2.5499015	0.0742115
15D02003	18.3 %	0.0088842	0.0005732	0.0237485	0.0338245	0.0540301	0.0268936	0.0428429	0.0246853	2.5486778	0.0742115
15D02005	20.2 %	0.0088699	0.0005732	0.0253214	0.0338245	0.0325497	0.0268936	0.0450233	0.0246853	2.5460265	0.0742115
15D02006	22.2 %	0.0088627	0.0005732	0.0261078	0.0338245	0.0188935	0.0268936	0.0461135	0.0246853	2.5447008	0.0742115
15D02008	24.5 %	0.0088489	0.0005732	0.0276202	0.0338245	0.0137331	0.0268936	0.0482099	0.0246853	2.5421515	0.0742115



OSU Argon Geochronology Lab																									
Intercept Values	36Ar					37Ar					38Ar					39Ar					40Ar				
		[fA]	1σ	r2			[fA]	1σ	r2			[fA]	1σ	r2			[fA]	1σ	r2			[fA]	1σ	r2	
15D01958	1.9 %	1.4520895	0.0030131	0.9024	EXP 150 of 150	2.5412	0.0314	0.1169	EXP 150 of 150	0.4690242	0.0254528	0.0499	EXP 149 of 150	14.3689	0.0233	0.9305	EXP 150 of 150	548.339	0.061	0.9991	EXP 150 of 150				
15D01959	2.0 %	0.5573651	0.0017214	0.7758	EXP 150 of 150	2.1310	0.0303	0.0957	EXP 150 of 150	0.1668399	0.0267374	0.0003	EXP 150 of 150	10.7485	0.0271	0.8420	EXP 150 of 150	236.777	0.045	0.9960	EXP 150 of 150				
15D01961	2.1 %	0.4202284	0.0016165	0.6660	EXP 150 of 150	2.3704	0.0318	0.1233	EXP 150 of 150	0.0802804	0.0260404	0.0187	EXP 150 of 150	11.4486	0.0237	0.8854	EXP 150 of 150	193.437	0.043	0.9937	EXP 150 of 150				
15D01962	2.2 %	0.4086562	0.0015428	0.6796	EXP 150 of 150	3.0116	0.0329	0.1911	EXP 150 of 150	0.1666318	0.0273396	0.0000	EXP 150 of 150	14.6332	0.0275	0.9123	EXP 150 of 150	204.227	0.036	0.9964	EXP 150 of 150				
15D01963	2.3 %	0.3144289	0.0013718	0.5585	EXP 150 of 150	3.0158	0.0300	0.2764	EXP 150 of 150	0.1537904	0.0248748	0.0002	EXP 150 of 150	14.2273	0.0223	0.9398	EXP 150 of 150	170.180	0.041	0.9909	EXP 150 of 150				
15D01965	2.4 %	0.2730641	0.0011623	0.4857	EXP 150 of 150	3.1300	0.0301	0.2763	EXP 150 of 150	0.1668535	0.0305445	0.0163	EXP 150 of 150	14.7686	0.0270	0.9214	EXP 150 of 150	160.674	0.038	0.9909	EXP 150 of 150				
15D01966	2.5 %	0.2256621	0.0012158	0.3974	EXP 150 of 150	2.9692	0.0281	0.2111	EXP 150 of 150	0.1329167	0.0271811	0.0002	EXP 150 of 150	14.0620	0.0259	0.9229	EXP 150 of 150	140.408	0.037	0.9847	EXP 150 of 150				
15D01967	2.6 %	0.2087414	0.0010711	0.3553	EXP 150 of 150	3.1451	0.0301	0.2481	EXP 150 of 150	0.1543249	0.0264936	0.0126	EXP 150 of 150	14.8102	0.0259	0.9303	EXP 149 of 150	139.160	0.040	0.9816	EXP 150 of 150				
15D01969	2.7 %	0.1758097	0.0009358	0.2032	EXP 149 of 150	3.0289	0.0287	0.2444	EXP 150 of 150	0.1161638	0.0299928	0.0020	EXP 150 of 150	14.4395	0.0264	0.9217	EXP 150 of 150	127.041	0.040	0.9755	EXP 150 of 150				
15D01970	2.8 %	0.1639541	0.0009511	0.1148	EXP 150 of 150	3.2706	0.0297	0.2340	EXP 150 of 150	0.1116169	0.0255692	0.0101	EXP 150 of 150	15.7038	0.0255	0.9335	EXP 149 of 150	129.530	0.038	0.9786	EXP 150 of 150				
15D01971	2.9 %	0.1671260	0.0009709	0.2581	EXP 150 of 150	3.5188	0.0302	0.2044	EXP 150 of 150	0.1310572	0.0256320	0.0061	EXP 150 of 150	17.1715	0.0251	0.9505	EXP 150 of 150	136.159	0.041	0.9807	EXP 150 of 150				
15D01973	3.0 %	0.1866862	0.0009339	0.3479	EXP 150 of 150	4.2360	0.0292	0.3376	EXP 150 of 150	0.2183823	0.0264473	0.0005	EXP 150 of 150	20.6269	0.0237	0.9675	EXP 150 of 150	160.225	0.039	0.9913	EXP 150 of 150				
15D01974	3.2 %	0.1956304	0.0009457	0.1823	EXP 149 of 150	4.9931	0.0290	0.4608	EXP 150 of 150	0.2709267	0.0245997	0.0220	EXP 149 of 150	24.5244	0.0259	0.9737	EXP 150 of 150	182.281	0.042	0.9931	EXP 150 of 150				
15D01975	3.4 %	0.1271319	0.0008576	0.0252	EXP 150 of 150	3.6536	0.0296	0.3007	EXP 150 of 150	0.1498358	0.0273214	0.0093	EXP 150 of 150	17.6589	0.0261	0.9468	EXP 150 of 150	127.058	0.036	0.9789	EXP 150 of 150				
15D01977	3.6 %	0.1999001	0.0010335	0.3570	EXP 150 of 150	5.7733	0.0315	0.4831	EXP 150 of 150	0.3362273	0.0264636	0.0218	EXP 150 of 150	28.7948	0.0299	0.9750	EXP 150 of 150	205.129	0.045	0.9950	EXP 149 of 150				
15D01978	3.8 %	0.2102763	0.0009497	0.3349	EXP 150 of 150	6.8072	0.0294	0.6338	EXP 150 of 150	0.3789468	0.0278539	0.0187	EXP 150 of 150	34.2891	0.0282	0.9836	EXP 150 of 150	236.882	0.043	0.9970	EXP 150 of 150				
15D01979	4.0 %	0.2717187	0.0011613	0.4897	EXP 150 of 150	9.0203	0.0333	0.7003	EXP 150 of 150	0.5584953	0.0255139	0.0541	EXP 150 of 150	47.0217	0.0273	0.9920	EXP 150 of 150	318.043	0.051	0.9980	EXP 150 of 150				
15D01981	4.3 %	0.2627029	0.0012525	0.4226	EXP 150 of 150	10.2251	0.0322	0.7522	EXP 150 of 150	0.5627064	0.0263255	0.0046	EXP 150 of 150	54.6024	0.0305	0.9927	EXP 150 of 150	353.541	0.051	0.9985	EXP 150 of 150				
15D01982	4.6 %	0.1910024	0.0010498	0.0318	EXP 150 of 150	8.8349	0.0304	0.7337	EXP 150 of 150	0.4482969	0.0271514	0.0046	EXP 150 of 150	46.7868	0.0298	0.9905	EXP 150 of 150	293.528	0.043	0.9983	EXP 150 of 150				
15D01983	4.9 %	0.2442274	0.0012047	0.2988	EXP 150 of 150	11.3142	0.0329	0.8010	EXP 150 of 150	0.7597691	0.0272559	0.0819	EXP 150 of 150	63.1083	0.0321	0.9940	EXP 150 of 150	389.871	0.049	0.9989	EXP 150 of 150				
15D01985	5.2 %	0.2641496	0.0011193	0.3492	EXP 150 of 150	13.2699	0.0255	0.8843	EXP 150 of 150	0.8736550	0.0261725	0.0314	EXP 150 of 150	77.4755	0.0296	0.9966	EXP 150 of 150	467.466	0.054	0.9991	EXP 150 of 150				
15D01986	5.5 %	0.3071840	0.0012830	0.3910	EXP 150 of 150	16.7943	0.0330	0.8929	EXP 150 of 150	1.1694993	0.0262173	0.0582	EXP 150 of 150	103.5043	0.0318	0.9978	EXP 150 of 150	608.943	0.065	0.9993	EXP 150 of 150				
15D01987	5.8 %	0.2829420	0.0010019	0.2458	EXP 150 of 150	17.8899	0.0303	0.9137	EXP 150 of 150	1.3716936	0.0257846	0.1786	EXP 150 of 150	117.3887	0.0337	0.9981	EXP 150 of 150	670.097	0.061	0.9995	EXP 150 of 150				
15D01989	6.1 %	0.2434494	0.0012086	0.0682	EXP 150 of 150	17.5799	0.0310	0.9005	EXP 150 of 150	1.3871633	0.0275843	0.1436	EXP 150 of 150	121.8846	0.0364	0.9980	EXP 150 of 150	677.162	0.065	0.9995	EXP 150 of 150				
15D01990	6.5 %	0.2163242	0.0011010	0.0183	EXP 149 of 150	17.3051	0.0341	0.8884	EXP 150 of 150	1.4326285	0.0263996	0.1088	EXP 150 of 150	126.9701	0.0344	0.9983	EXP 150 of 150	691.624	0.071	0.9994	EXP 150 of 150				
15D01991	7.0 %	0.2401583	0.0011089	0.0245	EXP 150 of 150	20.4729	0.0293	0.9438	EXP 150 of 150	1.8629236	0.0266390	0.1695	EXP 150 of 150	160.6471	0.0372	0.9988	EXP 150 of 150	862.709	0.075	0.9996	EXP 150 of 150				
15D01993	7.6 %	0.2717503	0.0011801	0.0085	EXP 150 of 150	26.9824	0.0338	0.9526	EXP 150 of 150	2.6749242	0.0270039	0.2579	EXP 150 of 150	230.5779	0.0462	0.9991	EXP 150 of 150	1212.222	0.080	0.9998	EXP 150 of 150				
15D01994	8.4 %	0.2426314	0.0012686	0.2324	EXP 150 of 150	29.9429	0.0302	0.9691	EXP 150 of 150	3.2139685	0.0276355	0.2722	EXP 150 of 150	278.1506	0.0453	0.9994	EXP 150 of 150	1429.026	0.089	0.9998	EXP 150 of 150				
15D01995	9.4 %	0.2545021	0.0012744	0.4328	EXP 150 of 150	35.6710	0.0335	0.9724	EXP 150 of 150	4.1333243	0.0258411	0.4516	EXP 149 of 150	360.5519	0.0493	0.9996	EXP 150 of 150	1827.816	0.103	0.9998	EXP 150 of 150				
15D01997	10.5 %	0.2422133	0.0011975	0.6006	EXP 150 of 150	36.0067	0.0347	0.9721	EXP 150 of 150	4.5258355	0.0254854	0.5217	EXP 150 of 150	391.6762	0.0504	0.9996	EXP 150 of 150	1965.706	0.107	0.9999	EXP 150 of 150				
15D01998	11.7 %	0.2188097	0.0011842	0.6351	EXP 150 of 150	34.2642	0.0312	0.9742	EXP 149 of 150	4.5883135	0.0296787	0.4364	EXP 150 of 150	396.9020	0.0516	0.9996	EXP 150 of 150	1975.707	0.103	0.9999	EXP 150 of 150				
15D01999	13.1 %	0.1910193	0.0010986	0.6751	EXP 150 of 150	29.2725	0.0322	0.9639	EXP 150 of 150	4.1647576	0.0274108	0.4893	EXP 150 of 150	351.2110	0.0459	0.9996	EXP 150 of 150	1739.893	0.104	0.9998	EXP 150 of 150				
15D02001	14.7 %	0.1980615	0.0011291	0.5490	EXP 150 of 150	27.9879	0.0290	0.9676	EXP 150 of 150	3.6750733	0.0267702	0.3727	EXP 149 of 150	312.9107	0.0427	0.9996	EXP 150 of 150	1549.252	0.092	0.9998	EXP 150 of 150				
15D02002	16.5 %	0.2056596	0.0010020	0.4822	EXP 150 of 150	28.6308	0.0324	0.9610	EXP 150 of 150	3.1083604	0.0275173	0.2450	EXP 150 of 150	259.0437	0.0436	0.9994	EXP 150 of 150	1281.234	0.079	0.9998	EXP 150 of 150				
15D02003	18.3 %	0.2074095	0.0011167	0.1941	EXP 150 of 150	30.8429	0.0308	0.9691	EXP 150 of 150	2.4615705	0.0268748	0.1892	EXP 150 of 150	203.2671	0.0413	0.9990	EXP 150 of 150	1002.940	0.070	0.9997	EXP 150 of 150				
15D02005	20.2 %	0.1702181	0.0009816	0.1717																					



15D01957.full.xls printed at 06-07-2015 (15:10)  
ArArCALC v2.6.2 -- Beta Version

Sample Parameters		Sample	Material	Location	Analyst	Temp	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	Irradiation	X-pos	Y-pos	Z/H-pos
15D01958	1.9 %	154-4	Groundmass	Kerguelen Plateau	Dan Miggins	1.9	FCT-NM (6C10-14)	28.201	0.082	Kuiper et al (2008)	8.81342	0.242	0.00178335	0.242	303.3	0.162	0.993562412	0.070	1	4.8E-14	21	JAN	2015	9	47	1	14-OSU-06	0.00	0.00	38.83
15D01959	2.0 %	154-4	Groundmass	Kerguelen Plateau	Dan Miggins	2	FCT-NM (6C10-14)	28.201	0.082	Kuiper et al (2008)	8.81342	0.242	0.00178335	0.242	303.3	0.162	0.993562412	0.070	1	4.8E-14	21	JAN	2015	10	2	1	14-OSU-06	0.00	0.00	38.83
15D01961	2.1 %	154-4	Groundmass	Kerguelen Plateau	Dan Miggins	2.1	FCT-NM (6C10-14)	28.201	0.082	Kuiper et al (2008)	8.81342	0.242	0.00178335	0.242	303.3	0.162	0.993562412	0.070	1	4.8E-14	21	JAN	2015	10	29	1	14-OSU-06	0.00	0.00	38.83
15D01962	2.2 %	154-4	Groundmass	Kerguelen Plateau	Dan Miggins	2.2	FCT-NM (6C10-14)	28.201	0.082	Kuiper et al (2008)	8.81342	0.242	0.00178335	0.242	303.3	0.162	0.993562412	0.070	1	4.8E-14	21	JAN	2015	10	43	1	14-OSU-06	0.00	0.00	38.83
15D01963	2.3 %	154-4	Groundmass	Kerguelen Plateau	Dan Miggins	2.3	FCT-NM (6C10-14)	28.201	0.082	Kuiper et al (2008)	8.81342	0.242	0.00178335	0.242	303.3	0.162	0.993562412	0.070	1	4.8E-14	21	JAN	2015	10	57	1	14-OSU-06	0.00	0.00	38.83
15D01965	2.4 %	154-4	Groundmass	Kerguelen Plateau	Dan Miggins	2.4	FCT-NM (6C10-14)	28.201	0.082	Kuiper et al (2008)	8.81342	0.242	0.00178335	0.242	303.3	0.162	0.993562412	0.070	1	4.8E-14	21	JAN	2015	11	23	1	14-OSU-06	0.00	0.00	38.83
15D01966	2.5 %	154-4	Groundmass	Kerguelen Plateau	Dan Miggins	2.5	FCT-NM (6C10-14)	28.201	0.082	Kuiper et al (2008)	8.81342	0.242	0.00178335	0.242	303.3	0.162	0.993562412	0.070	1	4.8E-14	21	JAN	2015	11	37	1	14-OSU-06	0.00	0.00	38.83
15D01967	2.6 %	154-4	Groundmass	Kerguelen Plateau	Dan Miggins	2.6	FCT-NM (6C10-14)	28.201	0.082	Kuiper et al (2008)	8.81342	0.242	0.00178335	0.242	303.3	0.162	0.993562412	0.070	1	4.8E-14	21	JAN	2015	11	50	1	14-OSU-06	0.00	0.00	38.83
15D01969	2.7 %	154-4	Groundmass	Kerguelen Plateau	Dan Miggins	2.7	FCT-NM (6C10-14)	28.201	0.082	Kuiper et al (2008)	8.81342	0.242	0.00178335	0.242	303.3	0.162	0.993562412	0.070	1	4.8E-14	21	JAN	2015	12	16	1	14-OSU-06	0.00	0.00	38.83
15D01970	2.8 %	154-4	Groundmass	Kerguelen Plateau	Dan Miggins	2.8	FCT-NM (6C10-14)	28.201	0.082	Kuiper et al (2008)	8.81342	0.242	0.00178335	0.242	303.3	0.162	0.993562412	0.070	1	4.8E-14	21	JAN	2015	12	29	1	14-OSU-06	0.00	0.00	38.83
15D01971	2.9 %	154-4	Groundmass	Kerguelen Plateau	Dan Miggins	2.9	FCT-NM (6C10-14)	28.201	0.082	Kuiper et al (2008)	8.81342	0.242	0.00178335	0.242	303.3	0.162	0.993562412	0.070	1	4.8E-14	21	JAN	2015	12	42	1	14-OSU-06	0.00	0.00	38.83
15D01973	3.0 %	154-4	Groundmass	Kerguelen Plateau	Dan Miggins	3	FCT-NM (6C10-14)	28.201	0.082	Kuiper et al (2008)	8.81342	0.242	0.00178335	0.242	303.3	0.162	0.993562412	0.070	1	4.8E-14	21	JAN	2015	13	7	1	14-OSU-06	0.00	0.00	38.83
15D01974	3.2 %	154-4	Groundmass	Kerguelen Plateau	Dan Miggins	3.2	FCT-NM (6C10-14)	28.201	0.082	Kuiper et al (2008)	8.81342	0.242	0.00178335	0.242	303.3	0.162	0.993562412	0.070	1	4.8E-14	21	JAN	2015	13	20	1	14-OSU-06	0.00	0.00	38.83
15D01975	3.4 %	154-4	Groundmass	Kerguelen Plateau	Dan Miggins	3.4	FCT-NM (6C10-14)	28.201	0.082	Kuiper et al (2008)	8.81342	0.242	0.00178335	0.242	303.3	0.162	0.993562412	0.070	1	4.8E-14	21	JAN	2015	13	32	1	14-OSU-06	0.00	0.00	38.83
15D01977	3.6 %	154-4	Groundmass	Kerguelen Plateau	Dan Miggins	3.6	FCT-NM (6C10-14)	28.201	0.082	Kuiper et al (2008)	8.81342	0.242	0.00178335	0.242	303.3	0.162	0.993562412	0.070	1	4.8E-14	21	JAN	2015	13	57	1	14-OSU-06	0.00	0.00	38.83
15D01978	3.8 %	154-4	Groundmass	Kerguelen Plateau	Dan Miggins	3.8	FCT-NM (6C10-14)	28.201	0.082	Kuiper et al (2008)	8.81342	0.242	0.00178335	0.242	303.3	0.162	0.993562412	0.070	1	4.8E-14	21	JAN	2015	14	10	1	14-OSU-06	0.00	0.00	38.83
15D01979	4.0 %	154-4	Groundmass	Kerguelen Plateau	Dan Miggins	4	FCT-NM (6C10-14)	28.201	0.082	Kuiper et al (2008)	8.81342	0.242	0.00178335	0.242	303.3	0.162	0.993562412	0.070	1	4.8E-14	21	JAN	2015	14	22	1	14-OSU-06	0.00	0.00	38.83
15D01981	4.3 %	154-4	Groundmass	Kerguelen Plateau	Dan Miggins	4.3	FCT-NM (6C10-14)	28.201	0.082	Kuiper et al (2008)	8.81342	0.242	0.00178335	0.242	303.3	0.162	0.993562412	0.070	1	4.8E-14	21	JAN	2015	14	47	1	14-OSU-06	0.00	0.00	38.83
15D01982	4.6 %	154-4	Groundmass	Kerguelen Plateau	Dan Miggins	4.6	FCT-NM (6C10-14)	28.201	0.082	Kuiper et al (2008)	8.81342	0.242	0.00178335	0.242	303.3	0.162	0.993562412	0.070	1	4.8E-14	21	JAN	2015	15	0	1	14-OSU-06	0.00	0.00	38.83
15D01983	4.9 %	154-4	Groundmass	Kerguelen Plateau	Dan Miggins	4.9	FCT-NM (6C10-14)	28.201	0.082	Kuiper et al (2008)	8.81342	0.242	0.00178335	0.242	303.3	0.162	0.993562412	0.070	1	4.8E-14	21	JAN	2015	15	12	1	14-OSU-06	0.00	0.00	38.83
15D01985	5.2 %	154-4	Groundmass	Kerguelen Plateau	Dan Miggins	5.2	FCT-NM (6C10-14)	28.201	0.082	Kuiper et al (2008)	8.81342	0.242	0.00178335	0.242	303.3	0.162	0.993562412	0.070	1	4.8E-14	21	JAN	2015	15	37	1	14-OSU-06	0.00	0.00	38.83
15D01986	5.5 %	154-4	Groundmass	Kerguelen Plateau	Dan Miggins	5.5	FCT-NM (6C10-14)	28.201	0.082	Kuiper et al (2008)	8.81342	0.242	0.00178335	0.242	303.3	0.162	0.993562412	0.070	1	4.8E-14	21	JAN	2015	15	50	1	14-OSU-06	0.00	0.00	38.83
15D01987	5.8 %	154-4	Groundmass	Kerguelen Plateau	Dan Miggins	5.8	FCT-NM (6C10-14)	28.201	0.0816	Kuiper et al (2008)	8.81342	0.242	0.00178335	0.242	303.3	0.162	0.993562412	0.070	1	4.8E-14	21	JAN	2015	16	2	1	14-OSU-06	0.00	0.00	38.83
15D01989	6.1 %	154-4	Groundmass	Kerguelen Plateau	Dan Miggins	6.1	FCT-NM (6C10-14)	28.201	0.0816	Kuiper et al (2008)	8.81342	0.242	0.00178335	0.242	303.3	0.162	0.993562412	0.070	1	4.8E-14	21	JAN	2015	16	27	1	14-OSU-06	0.00	0.00	38.83
15D01990	6.5 %	154-4	Groundmass	Kerguelen Plateau	Dan Miggins	6.5	FCT-NM (6C10-14)	28.201	0.0816	Kuiper et al (2008)	8.81342	0.242	0.00178335	0.242	303.3	0.162	0.993562412	0.070	1	4.8E-14	21	JAN	2015	16	40	1	14-OSU-06	0.00	0.00	38.83
15D01991	7.0 %	154-4	Groundmass	Kerguelen Plateau	Dan Miggins	7	FCT-NM (6C10-14)	28.201	0.0816	Kuiper et al (2008)	8.81342	0.242	0.00178335	0.242	303.3	0.162	0.993562412	0.070	1	4.8E-14	21	JAN	2015	16	52	1	14-OSU-06	0.00	0.00	38.83
15D01993	7.6 %	154-4	Groundmass	Kerguelen Plateau	Dan Miggins	7.6	FCT-NM (6C10-14)	28.201	0.0816	Kuiper et al (2008)	8.81342	0.242	0.00178335	0.242	303.3	0.162	0.993562412	0.070	1	4.8E-14	21	JAN	2015	17	17	1	14-OSU-06	0.00	0.00	38.83
15D01994	8.4 %	154-4	Groundmass	Kerguelen Plateau	Dan Miggins	8.4	FCT-NM (6C10-14)	28.201	0.0816	Kuiper et al (2008)	8.81342	0.242	0.00178335	0.242	303.3	0.162	0.993562412	0.070	1	4.8E-14	21	JAN	2015	17	30	1	14-OSU-06	0.00	0.00	38.83
15D01995	9.4 %	154-4	Groundmass	Kerguelen Plateau	Dan Miggins	9.4	FCT-NM (6C10-14)	28.201	0.0816	Kuiper et al (2008)	8.81342	0.242	0.00178335	0.242	303.3	0.162	0.993562412	0.070	1	4.8E-14	21	JAN	2015	17	42	1	14-OSU-06	0.00	0.00	38.83
15D01997	10.5 %	154-4	Groundmass	Kerguelen Plateau	Dan Miggins	10.5	FCT-NM (6C10-14)	28.201	0.0816	Kuiper et al (2008)	8.81342	0.242	0.00178335	0.242	303.3	0.162	0.993562412	0.070	1	4.8E-14	21	JAN	2015	18	7	1	14-OSU-06	0.00	0.00	38.83
15D01998	11.7 %	154-4	Groundmass	Kerguelen Plateau	Dan Miggins	11.7	FCT-NM (6C10-14)	28.201	0.0816	Kuiper et al (2008)	8.81342	0.242	0.00178335	0.242	303.3	0.162	0.993562412	0.070	1	4.8E-14	21	JAN	2015	18	19	1	14-OSU-06	0.00	0.00	38.83
15D01999	13.1 %	154-4	Groundmass	Kerguelen Plateau	Dan Miggins	13.1	FCT-NM (6C10-14)	28.201	0.0816	Kuiper et al (2008)	8.81342	0.242	0.00178335	0.242	303.3	0.162	0.993562412	0.070	1	4.8E-14	21	JAN	2015	18	32	1	14-OSU-06	0.00	0.00	38.83
15D02001	14.7 %	154-4	Groundmass	Kerguelen Plateau	Dan Miggins	14.7	FCT-NM (6C10-14)	28.201	0.0816	Kuiper et al (2008)	8.81342	0.242	0.00178335	0.242	303.3	0.162	0.993562412	0.070	1	4.8E-14	21	JAN	2015	18	57	1	14-OSU-06	0.00	0.00	38.83
15D02002	16.5 %	154-4	Groundmass	Kerguelen Plateau	Dan Miggins	16.5	FCT-NM (6C10-14)	28.201	0.0816	Kuiper et al (2008)	8.81342	0.242	0.00178335	0.242	303.3	0.162	0.993562412	0.070	1	4.8E-14	21	JAN	2015	19	10	1	14-OSU-06	0.00	0.00	38.83
15D02003	18.3 %	154-4	Groundmass	Kerguelen Plateau	Dan Miggins	18.3	FCT-NM (6C10-14)	28.201	0.0816	Kuiper et al (2008)	8.81342	0.242	0.00178335	0.242	303.3	0.162	0.993562412	0.070	1	4.8E-14	21	JAN	2015	19	22	1	14-OSU-06	0.00	0.00	38.83
15D02005	20.2 %	154-4	Groundmass	Kerguelen Plateau	Dan Miggins	20.2	FCT-NM (6C10-14)	28.201	0.0816	Kuiper et al (2008)	8.81342	0.242	0.00178335	0.242	303.3	0.162	0.993562412	0.070	1	4.8E-14	21	JAN	2015	19	48	1	14-OSU-06	0.00	0.00	38.83
15D02006	22.2 %	154-4	Groundmass	Kerguelen Plateau	Dan Miggins	22.2	FCT-NM (6C10-14)	28.201	0.0816	Kuiper et al (2008)	8.81342	0.242	0.00178335	0.242	303.3	0.162	0.993562412	0.070	1	4.8E-14	21	JAN	2015	20	1	1	14-OSU-06	0.00	0.00	38.83
15D02008	24.5 %	154-4	Groundmass	Kerguelen Plateau	Dan Miggins	24.5	FCT-NM (6C10-14)	28.201	0.0816	Kuiper et al (2008)	8.81342	0.242	0.00178335	0.242	303.3	0.162	0.993562412	0.070	1	4.8E-14	21	JAN	2015	20	26	1	14-OSU-06	0.00	0.00	38.83



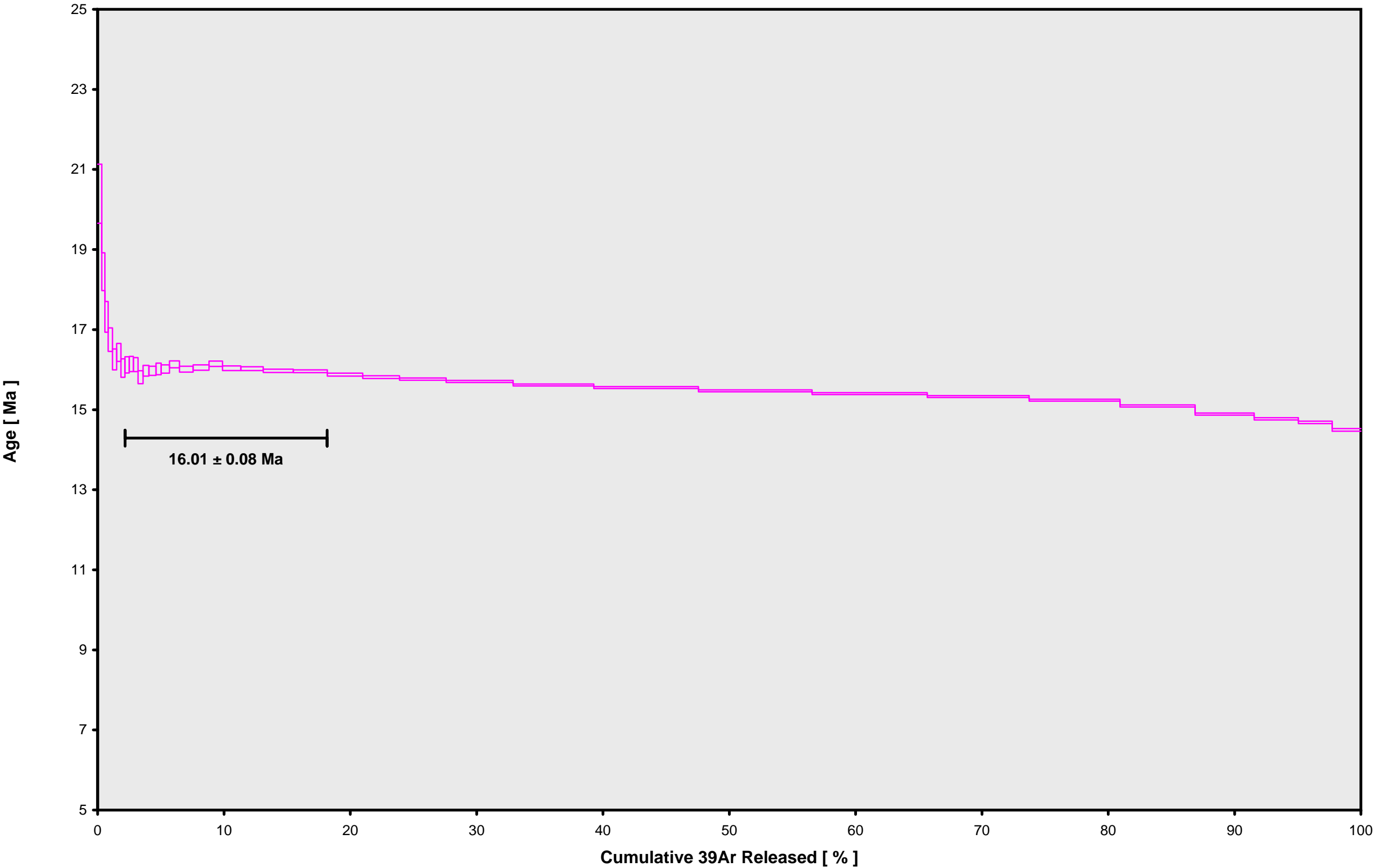
[illegible]







15D01957.AGE >>> 154-4 >>> KERGUELEN | FALLOON (14-PIL-01) PROJECT



Ar-Ages in Ma

WEIGHTED PLATEAU

16.01 ± 0.08

TOTAL FUSION

15.51 ± 0.08

NORMAL ISOCHRON

15.97 ± 0.10

INVERSE ISOCHRON

15.97 ± 0.10

MSWD (PROBABILITY)

3.41 (0%)

Sample Info

Groundmass

Kerguelen Plateau

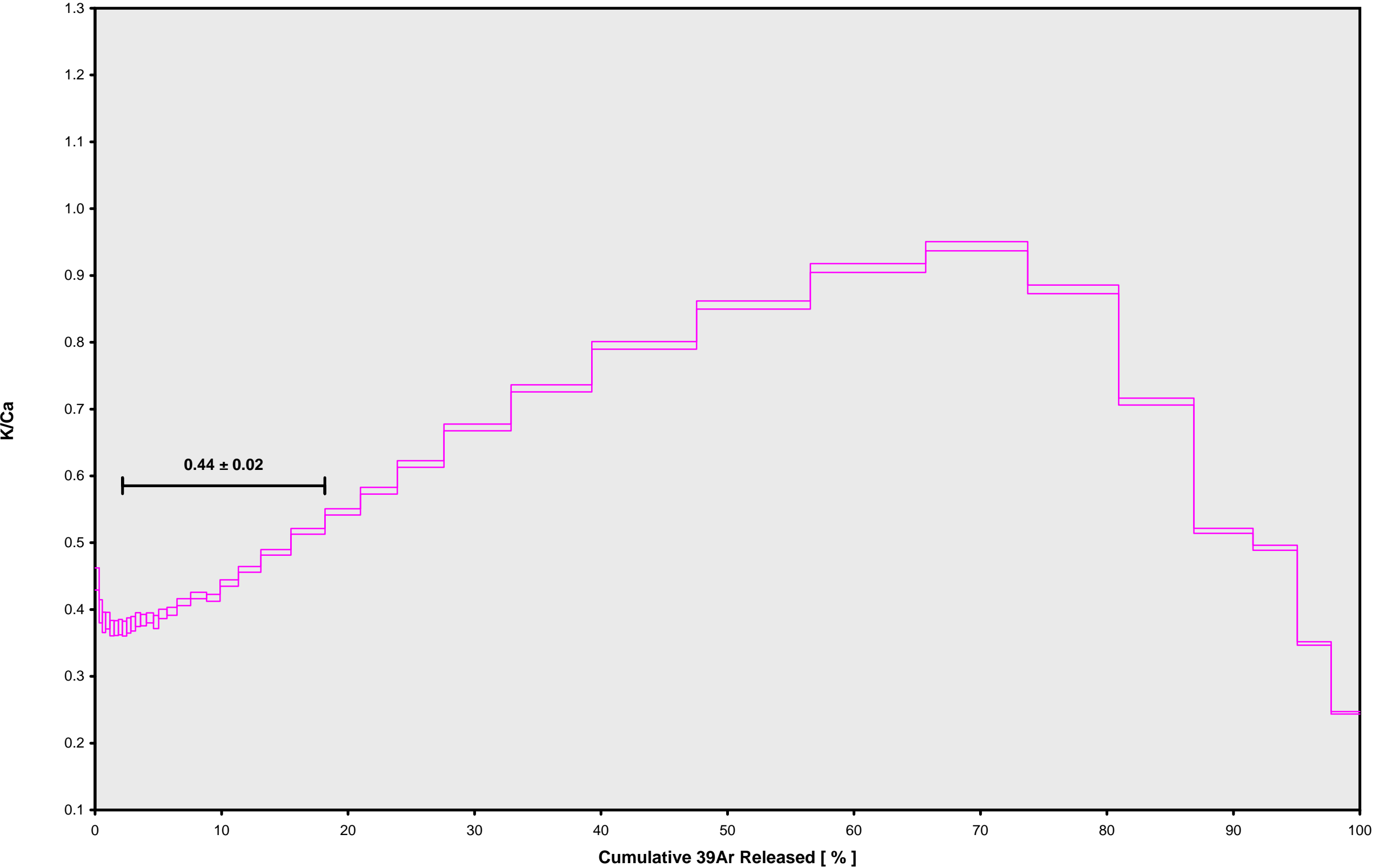
Dan Miggins

IRR = 14-OSU-06 (6C10-14)

J = 0.00178335 ± 0.00000432



15D01957.AGE >>> 154-4 >>> KERGUELEN | FALLOON (14-PIL-01) PROJECT



Ar-Ages in Ma

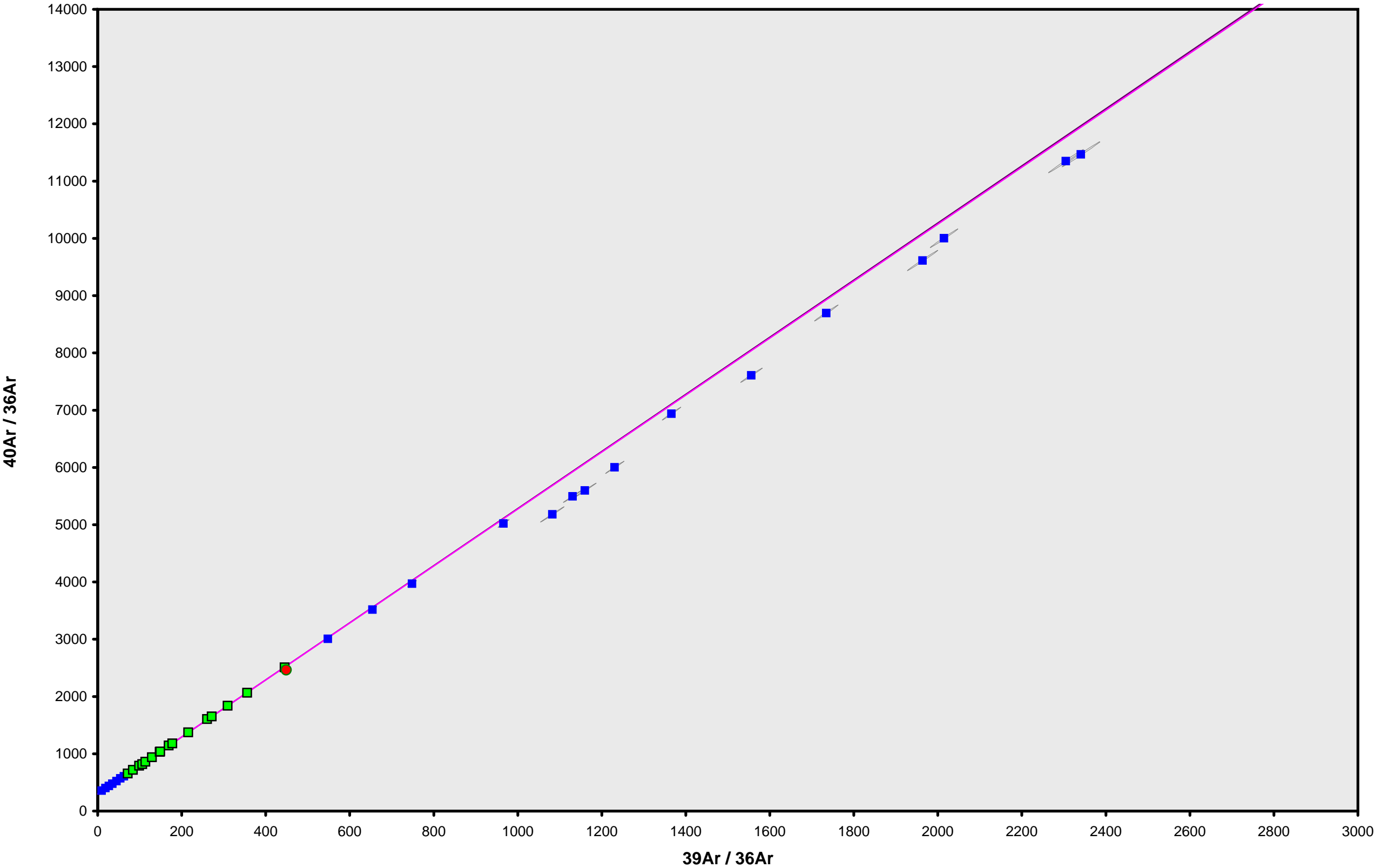
WEIGHTED PLATEAU  
16.01 ± 0.08  
TOTAL FUSION  
15.51 ± 0.08  
NORMAL ISOCHRON  
15.97 ± 0.10  
INVERSE ISOCHRON  
15.97 ± 0.10

Sample Info

Groundmass  
Kerguelen Plateau  
Dan Miggins  
  
IRR = 14-OSU-06 (6C10-14)  
J = 0.00178335 ± 0.00000432



15D01957.AGE >>> 154-4 >>> KERGUELEN | FALLOON (14-PIL-01) PROJECT



Ar-Ages in Ma

WEIGHTED PLATEAU

$16.01 \pm 0.08$

TOTAL FUSION

$15.51 \pm 0.08$

NORMAL ISOCHRON

$15.97 \pm 0.10$

INVERSE ISOCHRON

$15.97 \pm 0.10$

MSWD (PROBABILITY)

3.19 (0%)

40AR/36AR INTERCEPT

$298.5 \pm 4.6$

Sample Info

Groundmass

Kerguelen Plateau

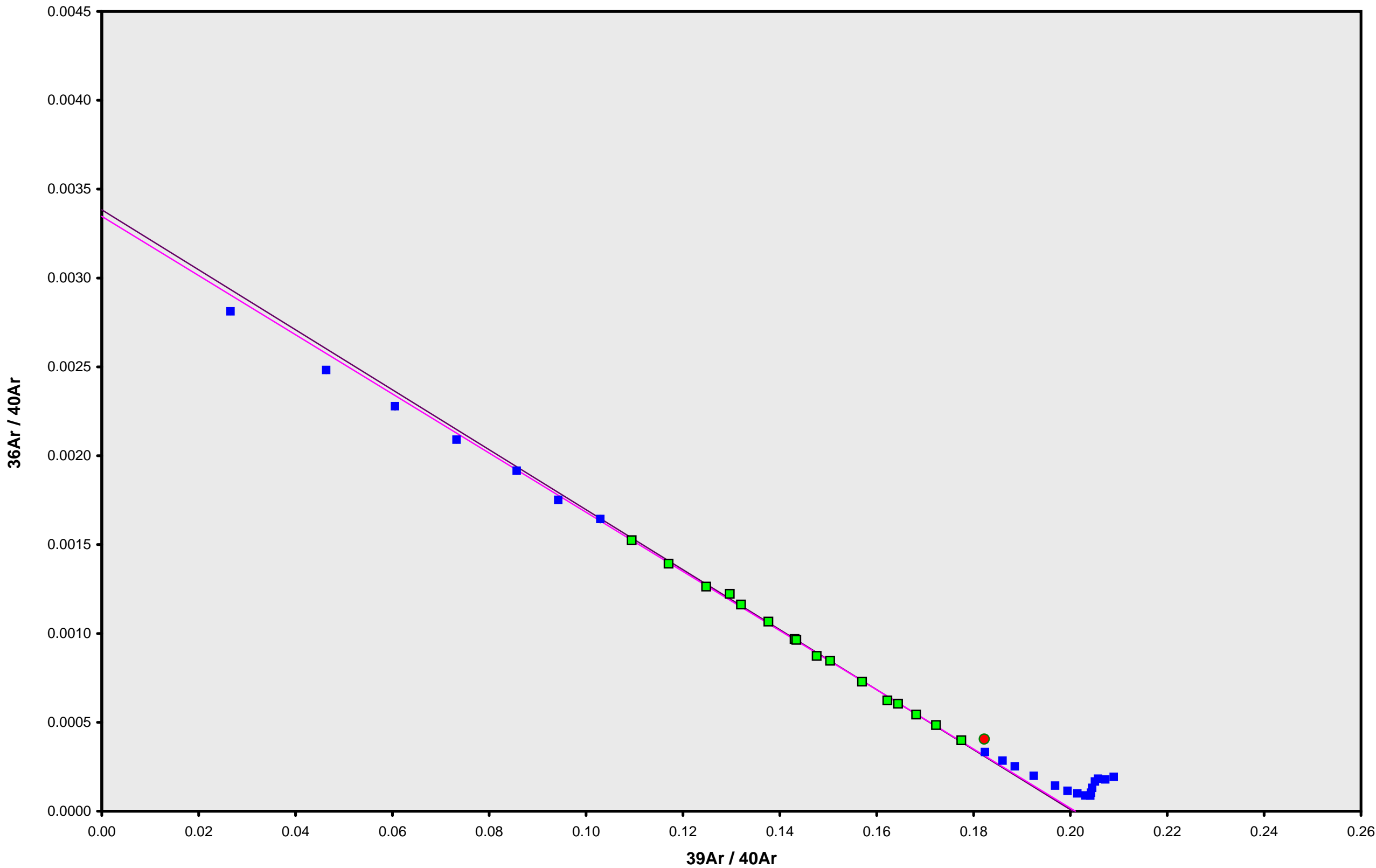
Dan Miggins

IRR = 14-OSU-06 (6C10-14)

J =  $0.00178335 \pm 0.00000432$



15D01957.AGE >>> 154-4 >>> KERGUELEN | FALLOON (14-PIL-01) PROJECT



### Ar-Ages in Ma

#### WEIGHTED PLATEAU

16.01  $\pm$  0.08

#### TOTAL FUSION

15.51  $\pm$  0.08

#### NORMAL ISOCHRON

15.97  $\pm$  0.10

#### INVERSE ISOCHRON

15.97  $\pm$  0.10

#### MSWD (PROBABILITY)

3.22 (0%)

#### SPREADING FACTOR

33.9%

#### 40AR/36AR INTERCEPT

298.7  $\pm$  4.7

### Sample Info

Groundmass

Kerguelen Plateau

Dan Miggins

IRR = 14-OSU-06 (6C10-14)

J = 0.00178335  $\pm$  0.00000432



Incremental Heating		36Ar(a) [fA]	37Ar(ca) [fA]	38Ar(cl) [fA]	39Ar(k) [fA]	40Ar(r) [fA]	Age ± 2σ (ka)	40Ar(r) (%)	39Ar(k) (%)	K/Ca ± 2σ
15D01905	1.9 %	1.0447192	35.0246	2.588763	76.4681	12.38774	518.7 ± 98.0	3.86	2.40	0.939 ± 0.014
15D01906	2.0 %	0.5654271	31.3959	1.773700	67.6173	12.08157	572.1 ± 71.3	6.74	2.13	0.926 ± 0.015
15D01908	2.1 %	0.3129370	22.8078	1.094287	48.8371	8.84565	580.0 ± 71.6	8.73	1.54	0.921 ± 0.019
15D01909	2.2 %	✓ 0.2966408	26.6468	1.010371	54.6199	9.12684	535.0 ± 61.5	9.42	1.72	0.881 ± 0.017
15D01910	2.3 %	✓ 0.1793496	18.2585	0.580026	38.0245	5.83222	491.1 ± 67.8	9.91	1.20	0.896 ± 0.024
15D01912	2.4 %	✓ 0.1790996	21.0962	0.534327	43.6875	6.94660	509.1 ± 66.5	11.59	1.37	0.890 ± 0.021
15D01913	2.5 %	✓ 0.1625273	21.5961	0.521498	43.5529	7.35778	540.9 ± 56.9	13.27	1.37	0.867 ± 0.020
15D01914	2.6 %	✓ 0.1701516	22.4346	0.491746	45.1690	7.69649	545.6 ± 61.6	13.26	1.42	0.866 ± 0.018
15D01916	2.7 %	✓ 0.1634510	25.6915	0.474709	51.7403	8.42503	521.4 ± 48.4	14.84	1.63	0.866 ± 0.017
15D01918	2.8 %	✓ 0.1375839	24.3099	0.367982	48.4108	7.62242	504.2 ± 51.9	15.77	1.52	0.856 ± 0.017
15D01919	2.9 %	✓ 0.0985139	19.6577	0.317333	39.3925	5.98670	486.6 ± 55.3	17.04	1.24	0.862 ± 0.021
15D01921	3.0 %	✓ 0.0942377	20.8684	0.275672	41.4056	6.16898	477.1 ± 50.4	18.11	1.30	0.853 ± 0.020
15D01922	3.2 %	✓ 0.1070198	24.5979	0.273985	48.5001	6.91171	456.3 ± 47.8	17.91	1.52	0.848 ± 0.017
15D01923	3.4 %	✓ 0.0988777	22.1528	0.230388	44.5820	6.46295	464.2 ± 48.7	18.09	1.40	0.865 ± 0.019
15D01925	3.6 %	✓ 0.1327866	36.9319	0.321492	73.0445	11.40988	500.2 ± 33.7	22.49	2.30	0.850 ± 0.012
15D01926	3.8 %	✓ 0.1022421	27.8770	0.247485	54.4798	8.72617	512.9 ± 40.0	22.38	1.71	0.840 ± 0.015
15D01927	4.0 %	✓ 0.1069430	31.4344	0.234495	62.9164	9.36139	476.4 ± 35.8	22.82	1.98	0.861 ± 0.014
15D01929	4.3 %	✓ 0.1479171	52.2867	0.403188	101.9903	16.05763	504.1 ± 24.8	26.82	3.21	0.839 ± 0.009
15D01930	4.6 %	✓ 0.1007716	40.7721	0.309739	77.7623	12.26475	505.0 ± 29.1	29.12	2.44	0.820 ± 0.011
15D01931	4.9 %	✓ 0.1241173	56.3715	0.360815	108.9602	16.64427	489.1 ± 23.0	31.15	3.42	0.831 ± 0.009
15D01933	5.2 %	✓ 0.1288195	63.0661	0.401168	120.4346	17.94388	477.1 ± 21.5	31.97	3.79	0.821 ± 0.008
15D01934	5.5 %	✓ 0.1004836	52.1588	0.337083	97.8645	14.41678	471.7 ± 22.8	32.61	3.08	0.807 ± 0.009
15D01935	5.8 %	✓ 0.1043605	56.9645	0.311037	105.2578	15.77902	480.0 ± 21.3	33.77	3.31	0.795 ± 0.008
15D01937	6.1 %	✓ 0.1001462	57.5269	0.355074	104.0495	15.12802	465.6 ± 21.8	33.75	3.27	0.778 ± 0.008
15D01938	6.5 %	✓ 0.1022173	62.2782	0.408621	110.4878	16.33762	473.5 ± 21.1	35.02	3.47	0.763 ± 0.008
15D01939	7.0 %	✓ 0.1032560	67.4343	0.328529	116.9918	17.21963	471.3 ± 19.4	35.99	3.68	0.746 ± 0.007
15D01941	7.6 %	✓ 0.1045439	74.7319	0.453753	126.2973	18.33685	464.9 ± 17.7	37.15	3.97	0.727 ± 0.007
15D01942	8.4 %	0.1231466	93.6498	0.513248	151.0158	20.84743	442.0 ± 16.3	36.33	4.75	0.693 ± 0.006
15D01943	9.4 %	0.1294786	104.5177	0.720314	157.9789	22.05110	447.0 ± 16.6	36.47	4.97	0.650 ± 0.005
15D01945	10.5 %	0.1305802	104.3152	0.691989	142.1062	19.16685	431.9 ± 17.8	33.11	4.47	0.586 ± 0.005
15D01946	11.7 %	0.1582505	133.9759	0.865156	149.3512	19.44038	416.8 ± 18.4	29.30	4.69	0.479 ± 0.004
15D01947	13.1 %	0.1857335	154.9119	0.947440	145.6326	19.44282	427.5 ± 19.4	26.11	4.58	0.404 ± 0.003
15D01949	14.7 %	0.1838474	128.8899	0.786122	119.5648	15.01326	402.1 ± 24.3	21.61	3.76	0.399 ± 0.003
15D01950	16.5 %	0.1940844	156.9776	0.958218	113.0415	14.14594	400.7 ± 28.0	19.75	3.55	0.310 ± 0.002
15D01951	18.3 %	0.1533133	131.7699	0.617259	74.2874	8.95199	385.9 ± 35.2	16.48	2.34	0.242 ± 0.002
15D01953	20.2 %	0.1234406	112.7973	0.482515	54.7097	6.62067	387.5 ± 44.6	15.34	1.72	0.209 ± 0.002
15D01954	22.2 %	0.1535234	143.6827	0.505035	53.1897	6.38867	384.6 ± 53.2	12.33	1.67	0.159 ± 0.001
15D01956	24.5 %	0.2078496	220.6499	0.655029	68.0159	8.89048	418.5 ± 46.1	12.63	2.14	0.133 ± 0.001

Σ 6.8123890 2502.5108 22.749591 3181.4380 462.43816

Information on Analysis	Results	40(r)/39(k) ± 2σ	Age ± 2σ (ka)	MSWD	39Ar(k) (%,n)	K/Ca ± 2σ
Sample = 1180180-2 Material = Groundmass Location = Kerguelen Plateau Analyst = Dan Miggins Project = KERGUELEN   FALLOON (14- Mass Discrimination Law = LIN Irradiation = 14-OSU-06 (6C11-14) J = 0.00177095 ± 0.00000427 FCT-NM = 28.201 ± 0.023 Ma	Age Plateau	0.15052 ± 0.00238 ± 1.58%	482.0 ± 8.0 ± 1.65% Full External Error ± 13.5 Analytical Error ± 7.6	1.57 4% 1.59 1.2523	55.31 24 2σ Confidence Limit Error Magnification	0.803 ± 0.020
	Total Fusion Age	0.14536 ± 0.00175 ± 1.21%	465.4 ± 6.0 ± 1.30% Full External Error ± 12.1 Analytical Error ± 5.6		38	0.547 ± 0.001



Normal Isochron		39(k)/36(a) ± 2σ		40(a+r)/36(a) ± 2σ	r.i.
15D01905	1.9 %		73.19 ± 0.57	307.36 ± 2.33	0.9684
15D01906	2.0 %		119.59 ± 1.09	316.87 ± 2.85	0.9680
15D01908	2.1 %		156.06 ± 1.83	323.77 ± 3.81	0.9636
15D01909	2.2 %	✓	184.13 ± 2.18	326.27 ± 3.89	0.9641
15D01910	2.3 %	✓	212.01 ± 3.12	328.02 ± 4.94	0.9522
15D01912	2.4 %	✓	243.93 ± 4.07	334.29 ± 5.69	0.9641
15D01913	2.5 %	✓	267.97 ± 4.15	340.77 ± 5.42	0.9540
15D01914	2.6 %	✓	265.46 ± 4.45	340.73 ± 5.83	0.9630
15D01916	2.7 %	✓	316.55 ± 4.92	347.04 ± 5.55	0.9568
15D01918	2.8 %	✓	351.86 ± 6.53	350.90 ± 6.68	0.9603
15D01919	2.9 %	✓	399.87 ± 8.83	356.27 ± 8.17	0.9515
15D01921	3.0 %	✓	439.37 ± 9.64	360.96 ± 8.26	0.9486
15D01922	3.2 %	✓	453.19 ± 9.86	360.08 ± 8.10	0.9583
15D01923	3.4 %	✓	450.88 ± 9.86	360.86 ± 8.20	0.9523
15D01925	3.6 %	✓	550.09 ± 10.30	381.43 ± 7.32	0.9658
15D01926	3.8 %	✓	532.85 ± 11.31	380.85 ± 8.37	0.9572
15D01927	4.0 %	✓	588.32 ± 12.41	383.04 ± 8.34	0.9611
15D01929	4.3 %	✓	689.51 ± 11.93	404.06 ± 7.14	0.9707
15D01930	4.6 %	✓	771.67 ± 17.31	417.21 ± 9.62	0.9672
15D01931	4.9 %	✓	877.88 ± 17.90	429.60 ± 8.94	0.9740
15D01933	5.2 %	✓	934.91 ± 19.09	434.79 ± 9.04	0.9766
15D01934	5.5 %	✓	973.93 ± 21.56	438.97 ± 9.97	0.9691
15D01935	5.8 %	✓	1008.60 ± 21.66	446.70 ± 9.83	0.9709
15D01937	6.1 %	✓	1038.98 ± 23.48	446.56 ± 10.34	0.9711
15D01938	6.5 %	✓	1080.91 ± 24.74	455.33 ± 10.64	0.9743
15D01939	7.0 %	✓	1133.03 ± 24.88	462.27 ± 10.38	0.9731
15D01941	7.6 %	✓	1208.08 ± 25.80	470.90 ± 10.27	0.9734
15D01942	8.4 %		1226.31 ± 24.70	464.79 ± 9.53	0.9770
15D01943	9.4 %		1220.12 ± 25.07	465.81 ± 9.72	0.9797
15D01945	10.5 %		1088.27 ± 21.28	442.28 ± 8.81	0.9759
15D01946	11.7 %		943.76 ± 16.75	418.35 ± 7.55	0.9766
15D01947	13.1 %		784.09 ± 12.19	400.18 ± 6.32	0.9749
15D01949	14.7 %		650.35 ± 10.51	377.16 ± 6.20	0.9734
15D01950	16.5 %		582.43 ± 9.81	368.39 ± 6.29	0.9768
15D01951	18.3 %		484.55 ± 8.41	353.89 ± 6.30	0.9649
15D01953	20.2 %		443.21 ± 8.85	349.13 ± 7.19	0.9591
15D01954	22.2 %		346.46 ± 6.54	337.11 ± 6.51	0.9662
15D01956	24.5 %		327.24 ± 5.10	338.27 ± 5.35	0.9706

Results	40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (ka)	MSWD
Normal Isochron	300.18 ± 2.30 ± 0.77%	0.14399 ± 0.00370 ± 2.57%	461.1 ± 12.0 ± 2.61% Full External Error ± 15.9 Analytical Error ± 11.8	0.85 66%
Statistics	2σ Confidence Limit Error Magnification Number of Data Points	1.60 1.0000 24	Convergence Number of Iterations Calculated Line	0.000000965793 5 Weighted York-2



Inverse Isochron		39(k)/40(a+r) ± 2σ		36(a)/40(a+r) ± 2σ	r.i.
15D01905	1.9 %		0.2381426 ± 0.0004607	0.00325354 ± 0.00002465	0.0398
15D01906	2.0 %		0.3774021 ± 0.0008646	0.00315590 ± 0.00002840	0.0866
15D01908	2.1 %		0.4820157 ± 0.0015254	0.00308864 ± 0.00003631	0.1481
15D01909	2.2 %	✓	0.5643478 ± 0.0017978	0.00306497 ± 0.00003654	0.1584
15D01910	2.3 %	✓	0.6463458 ± 0.0029869	0.00304861 ± 0.00004596	0.2296
15D01912	2.4 %	✓	0.7296997 ± 0.0033051	0.00299145 ± 0.00005088	0.1996
15D01913	2.5 %	✓	0.7863722 ± 0.0037614	0.00293452 ± 0.00004670	0.2369
15D01914	2.6 %	✓	0.7790935 ± 0.0036039	0.00293485 ± 0.00005026	0.2090
15D01916	2.7 %	✓	0.9121292 ± 0.0042454	0.00288147 ± 0.00004605	0.2357
15D01918	2.8 %	✓	1.0027399 ± 0.0053367	0.00284980 ± 0.00005428	0.2327
15D01919	2.9 %	✓	1.1223708 ± 0.0079272	0.00280686 ± 0.00006438	0.2731
15D01921	3.0 %	✓	1.2172305 ± 0.0088152	0.00277038 ± 0.00006338	0.2857
15D01922	3.2 %	✓	1.2585649 ± 0.0080945	0.00277713 ± 0.00006244	0.2543
15D01923	3.4 %	✓	1.2494499 ± 0.0086731	0.00277113 ± 0.00006300	0.2752
15D01925	3.6 %	✓	1.4421895 ± 0.0071852	0.00262174 ± 0.00005034	0.2250
15D01926	3.8 %	✓	1.3991165 ± 0.0089061	0.00262572 ± 0.00005773	0.2614
15D01927	4.0 %	✓	1.5359300 ± 0.0092390	0.00261072 ± 0.00005684	0.2497
15D01929	4.3 %	✓	1.7064606 ± 0.0072476	0.00247489 ± 0.00004372	0.2041
15D01930	4.6 %	✓	1.8496011 ± 0.0108353	0.00239688 ± 0.00005526	0.2317
15D01931	4.9 %	✓	2.0434795 ± 0.0096370	0.00232774 ± 0.00004842	0.2000
15D01933	5.2 %	✓	2.1502317 ± 0.0096180	0.00229994 ± 0.00004781	0.1889
15D01934	5.5 %	✓	2.2186610 ± 0.0124391	0.00227804 ± 0.00005175	0.2250
15D01935	5.8 %	✓	2.2579000 ± 0.0119061	0.00223865 ± 0.00004924	0.2172
15D01937	6.1 %	✓	2.3266253 ± 0.0128652	0.00223934 ± 0.00005186	0.2187
15D01938	6.5 %	✓	2.3738942 ± 0.0125039	0.00219620 ± 0.00005134	0.2051
15D01939	7.0 %	✓	2.4510239 ± 0.0126897	0.00216326 ± 0.00004857	0.2091
15D01941	7.6 %	✓	2.5654751 ± 0.0128149	0.00212360 ± 0.00004633	0.2063
15D01942	8.4 %		2.6384183 ± 0.0115468	0.00215151 ± 0.00004411	0.1879
15D01943	9.4 %		2.6193584 ± 0.0109520	0.00214681 ± 0.00004478	0.1740
15D01945	10.5 %		2.4605734 ± 0.0107022	0.00226100 ± 0.00004502	0.1910
15D01946	11.7 %		2.2559444 ± 0.0087634	0.00239037 ± 0.00004312	0.1822
15D01947	13.1 %		1.9593483 ± 0.0069040	0.00249887 ± 0.00003948	0.1807
15D01949	14.7 %		1.7243220 ± 0.0065041	0.00265138 ± 0.00004360	0.1889
15D01950	16.5 %		1.5810465 ± 0.0057843	0.00271455 ± 0.00004637	0.1736
15D01951	18.3 %		1.3692004 ± 0.0064136	0.00282574 ± 0.00005033	0.2256
15D01953	20.2 %		1.2694452 ± 0.0074050	0.00286423 ± 0.00005897	0.2477
15D01954	22.2 %		1.0277236 ± 0.0051159	0.00296636 ± 0.00005726	0.2162
15D01956	24.5 %		0.9673706 ± 0.0036887	0.00295619 ± 0.00004677	0.1848

Results	40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (ka)	MSWD
Inverse Isochron	300.23 ± 2.31 ± 0.77%	0.14404 ± 0.00370 ± 2.57%	461.2 ± 12.0 ± 2.61%	0.86 66%
			Full External Error ± 15.9	
			Analytical Error ± 11.8	
Statistics	2σ Confidence Limit	1.60	Convergence	0.0037051201
	Error Magnification	1.0000	Number of Iterations	3
	Number of Data Points	24	Calculated Line	Weighted York-2
	Spreading Factor	28.8%		







OSU Argon Geochronology Lab																																	
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
15D01905	1.9 %	1.0447192	0.38	0.0000000	0.00	0.0092465	0.76	0.0003549	1.76	35.0246	0.76	0.1952580	0.38	0.0000000	0.00	0.870207	0.09	0.0004868	0.76	2.588763	1.99	76.4681	0.09	0.0235716	0.76	12.38774	9.45	308.7145	0.38	0.0000000	0.00	0.0772328	0.09
15D01906	2.0 %	0.5654271	0.44	0.0000000	0.00	0.0082885	0.81	0.0002432	2.35	31.3959	0.81	0.1056783	0.44	0.0000000	0.00	0.769485	0.09	0.0004364	0.81	1.773700	2.53	67.6173	0.09	0.0211294	0.81	12.08157	6.23	167.0837	0.44	0.0000000	0.00	0.0682935	0.09
15D01908	2.1 %	0.3129370	0.58	0.0000000	0.00	0.0060213	1.05	0.0001501	3.44	22.8078	1.05	0.0584879	0.58	0.0000000	0.00	0.555766	0.11	0.0003170	1.05	1.094287	3.56	48.8371	0.11	0.0153496	1.05	8.84565	6.17	92.4729	0.58	0.0000000	0.00	0.0493255	0.11
15D01909	2.2 %	✓ 0.2966408	0.58	0.0000000	0.00	0.0070348	0.95	0.0001386	3.76	26.6468	0.95	0.0554422	0.58	0.0000000	0.00	0.621575	0.10	0.0003704	0.95	1.010371	3.87	54.6199	0.10	0.0179333	0.95	9.12684	5.75	87.6573	0.58	0.0000000	0.00	0.0551661	0.10
15D01910	2.3 %	✓ 0.1793496	0.73	0.0000000	0.00	0.0048202	1.33	0.0000796	6.90	18.2585	1.33	0.0335204	0.73	0.0000000	0.00	0.432719	0.12	0.0002538	1.33	0.580026	6.96	38.0245	0.12	0.0122879	1.33	5.83222	6.91	52.9978	0.73	0.0000000	0.00	0.0384048	0.12
15D01912	2.4 %	✓ 0.1790996	0.83	0.0000000	0.00	0.0055694	1.16	0.0000733	7.33	21.0962	1.16	0.0334737	0.83	0.0000000	0.00	0.497164	0.11	0.0002932	1.16	0.534327	7.39	43.6875	0.11	0.0141977	1.16	6.94660	6.53	52.9239	0.83	0.0000000	0.00	0.0441244	0.11
15D01913	2.5 %	✓ 0.1625273	0.77	0.0000000	0.00	0.0057014	1.14	0.0000716	7.46	21.5961	1.14	0.0303763	0.77	0.0000000	0.00	0.495632	0.11	0.0003002	1.14	0.521498	7.51	43.5529	0.11	0.0145342	1.14	7.35778	5.25	48.0268	0.77	0.0000000	0.00	0.0439884	0.11
15D01914	2.6 %	✓ 0.1701516	0.83	0.0000000	0.00	0.0059227	1.06	0.0000675	8.14	22.4346	1.06	0.0318013	0.83	0.0000000	0.00	0.514023	0.11	0.0003118	1.06	0.491746	8.19	45.1690	0.11	0.0150985	1.06	7.69649	5.65	50.2798	0.83	0.0000000	0.00	0.0456206	0.11
15D01916	2.7 %	✓ 0.1634510	0.77	0.0000000	0.00	0.0067826	0.96	0.0000652	8.60	25.6915	0.96	0.0305490	0.77	0.0000000	0.00	0.588805	0.10	0.0003571	0.96	0.474709	8.65	51.7403	0.10	0.0172904	0.96	8.42503	4.64	48.2998	0.77	0.0000000	0.00	0.0522577	0.10
15D01918	2.8 %	✓ 0.1375839	0.92	0.0000000	0.00	0.0064178	1.01	0.0000505	10.22	24.3099	1.01	0.0257144	0.92	0.0000000	0.00	0.550914	0.11	0.0003379	1.01	0.367982	10.26	48.4108	0.11	0.0163605	1.01	7.62242	5.15	40.6561	0.92	0.0000000	0.00	0.0488949	0.11
15D01919	2.9 %	✓ 0.0985139	1.10	0.0000000	0.00	0.0051896	1.22	0.0000436	12.07	19.6577	1.22	0.0184123	1.10	0.0000000	0.00	0.448287	0.12	0.0002732	1.22	0.317333	12.11	39.3925	0.12	0.0132296	1.22	5.98670	5.68	29.1109	1.10	0.0000000	0.00	0.0397864	0.12
15D01921	3.0 %	✓ 0.0942377	1.09	0.0000000	0.00	0.0055093	1.16	0.0000379	13.68	20.8684	1.16	0.0176130	1.09	0.0000000	0.00	0.471195	0.11	0.0002901	1.16	0.275672	13.71	41.4056	0.11	0.0140444	1.16	6.16898	5.28	27.8472	1.09	0.0000000	0.00	0.0418196	0.11
15D01922	3.2 %	✓ 0.1070198	1.08	0.0000000	0.00	0.0064938	1.00	0.0000376	14.07	24.5979	1.00	0.0200020	1.08	0.0000000	0.00	0.551931	0.11	0.0003419	1.00	0.273985	14.10	48.5001	0.11	0.0165544	1.00	6.91171	5.23	31.6244	1.08	0.0000000	0.00	0.0489851	0.11
15D01923	3.4 %	✓ 0.0988777	1.09	0.0000000	0.00	0.0058483	1.10	0.0000316	17.00	22.1528	1.10	0.0184802	1.09	0.0000000	0.00	0.507343	0.11	0.0003079	1.10	0.230388	17.03	44.5820	0.11	0.0149089	1.10	6.46295	5.24	29.2184	1.09	0.0000000	0.00	0.0450278	0.11
15D01925	3.6 %	✓ 0.1327866	0.93	0.0000000	0.00	0.0097500	0.70	0.0000442	12.13	36.9319	0.70	0.0248178	0.93	0.0000000	0.00	0.831246	0.09	0.0005134	0.70	0.321492	12.17	73.0445	0.09	0.0248552	0.70	11.40988	3.37	39.2384	0.93	0.0000000	0.00	0.0737749	0.09
15D01926	3.8 %	✓ 0.1022421	1.06	0.0000000	0.00	0.0073595	0.87	0.0000340	15.37	27.8770	0.87	0.0191090	1.06	0.0000000	0.00	0.619980	0.10	0.0003875	0.87	0.247485	15.39	54.4798	0.10	0.0187612	0.87	8.72617	3.90	30.2125	1.06	0.0000000	0.00	0.0550246	0.10
15D01927	4.0 %	✓ 0.1069430	1.05	0.0000000	0.00	0.0082987	0.81	0.0000322	16.01	31.4344	0.81	0.0199876	1.05	0.0000000	0.00	0.715988	0.09	0.0004369	0.81	0.234495	16.04	62.9164	0.09	0.0211554	0.81	9.36139	3.76	31.6017	1.05	0.0000000	0.00	0.0635455	0.09
15D01929	4.3 %	✓ 0.1479171	0.86	0.0000000	0.00	0.0138037	0.54	0.0000554	9.73	52.2867	0.54	0.0276457	0.86	0.0000000	0.00	1.160649	0.08	0.0007268	0.54	0.403188	9.77	101.9903	0.08	0.0351890	0.54	16.05763	2.46	43.7095	0.86	0.0000000	0.00	0.1030102	0.08
15D01930	4.6 %	✓ 0.1007716	1.12	0.0000000	0.00	0.0107638	0.66	0.0000426	12.60	40.7721	0.66	0.0188342	1.12	0.0000000	0.00	0.884935	0.09	0.0005667	0.66	0.309739	12.63	77.7623	0.09	0.0274396	0.66	12.26475	2.88	29.7780	1.12	0.0000000	0.00	0.0785400	0.09
15D01931	4.9 %	✓ 0.1241173	1.02	0.0000000	0.00	0.0148821	0.51	0.0000496	11.10	56.3715	0.51	0.0231975	1.02	0.0000000	0.00	1.239967	0.08	0.0007836	0.51	0.360815	11.14	108.9602	0.08	0.0379380	0.51	16.64427	2.35	36.6767	1.02	0.0000000	0.00	0.1100498	0.08
15D01933	5.2 %	✓ 0.1288195	1.02	0.0000000	0.00	0.0166495	0.49	0.0000552	10.18	63.0661	0.49	0.0240764	1.02	0.0000000	0.00	1.370545	0.08	0.0008766	0.49	0.401168	10.22	120.4346	0.08	0.0424435	0.49	17.94388	2.26	38.0662	1.02	0.0000000	0.00	0.1216389	0.08
15D01934	5.5 %	✓ 0.1004836	1.10	0.0000000	0.00	0.0137699	0.56	0.0000464	11.78	52.1588	0.56	0.0187804	1.10	0.0000000	0.00	1.113697	0.08	0.0007250	0.56	0.337083	11.81	97.8645	0.08	0.0351029	0.56	14.41678	2.42	29.6929	1.10	0.0000000	0.00	0.0988431	0.08
15D01935	5.8 %	✓ 0.1043605	1.07	0.0000000	0.00	0.0150386	0.53	0.0000428	12.32	56.9645	0.53	0.0195050	1.07	0.0000000	0.00	1.197834	0.08	0.0007918	0.53	0.311037	12.35	105.2578	0.08	0.0383371	0.53	15.77902	2.22	30.8385	1.07	0.0000000	0.00	0.1063104	0.08
15D01937	6.1 %	✓ 0.1001462	1.13	0.0000000	0.00	0.0151871	0.52	0.0000488	11.10	57.5269	0.52	0.0187173	1.13	0.0000000	0.00	1.184083	0.08	0.0007996	0.52	0.355074	11.14	104.0495	0.08	0.0387156	0.52	15.12802	2.34	29.5932	1.13	0.0000000	0.00	0.1050900	0.08
15D01938	6.5 %	✓ 0.1022173	1.14	0.0000000	0.00	0.0164414	0.51	0.0000562	9.78	62.2782	0.51	0.0191044	1.14	0.0000000	0.00	1.257351	0.08	0.0008657	0.51	0.408621	9.83	110.4878	0.08	0.0419132	0.51	16.33762	2.23	30.2052	1.14	0.0000000	0.00	0.1115926	0.08
15D01939	7.0 %	✓ 0.1032560	1.10	0.0000000	0.00	0.0178027	0.49	0.0000452	11.66	67.4343	0.49	0.0192986	1.10	0.0000000	0.00	1.331366	0.08	0.0009373	0.49	0.328529	11.70	116.9918	0.08	0.0453833	0.49	17.21963	2.06	30.5122	1.10	0.0000000	0.00	0.1181617	0.08
15D01941	7.6 %	✓ 0.1045439	1.06	0.0000000	0.00	0.0197292	0.45	0.0000624	8.30	74.7319	0.45	0.0195393	1.06	0.0000000	0.00	1.437263	0.08	0.0010388	0.45	0.453753	8.35	126.2973	0.08	0.0502946	0.45	18.33685	1.90	30.8927	1.06	0.0000000	0.00	0.1275602	0.08
15D01942	8.4 %	0.1231466	1.00	0.0000000	0.00	0.0247236	0.42	0.0000706	7.45	93.6498	0.42	0.0230161	1.00	0.0000000	0.00	1.718560	0.08	0.0013017	0.42	0.513248	7.51	151.0158	0.08	0.0630263	0.42	20.84743	1.84	36.3898	1.00	0.0000000	0.00	0.1525260	0.08
15D01943	9.4 %	0.1294786	1.02	0.0000000	0.00	0.0275927	0.39	0.0000992	5.39	104.5177	0.39	0.0241996	1.02	0.0000000	0.00	1.797799	0.08	0.0014528	0.39	0.720314	5.47	157.9789	0.08	0.0703404	0.39	22.05110	1.86	38.2609	1.02	0.0000000	0.00	0.1595586	0.08
15D01945	10.5 %	0.1305802	0.97	0.0000000	0.00	0.0275392	0.40	0.0000953	5.60	104.3152	0.40	0.0244054	0.97	0.0000000	0.00	1.617169	0.08	0.0014500	0.40	0.691989	5.67	142.1062	0.08	0.0702041	0.40	19.16685	2.06	38.5864	0.97	0.0000000	0.00	0.1435273	0.08
15D01946	11.7 %	0.1582505	0.88	0.0000000	0.00	0.0353696																											



Additional Parameters		40Ar/39Ar	1σ	37Ar/39Ar	1σ	36Ar/39Ar	1σ	Time (days)	37Ar (decay)	39Ar (decay)	40Ar (moles)
15D01905	1.9 %	4.198881	0.004060	0.457888	0.003484	0.013783	0.000053	84.422	5.312039	1.00059674	1.542E-11
15D01906	2.0 %	2.649876	0.003034	0.464172	0.003789	0.008486	0.000038	84.433	5.313132	1.00059682	8.603E-12
15D01908	2.1 %	2.074979	0.003282	0.466871	0.004929	0.006532	0.000038	84.451	5.315100	1.00059695	4.866E-12
15D01909	2.2 % ✓	1.772385	0.002822	0.487699	0.004675	0.005561	0.000032	84.461	5.316121	1.00059702	4.648E-12
15D01910	2.3 % ✓	1.547669	0.003574	0.480021	0.006387	0.004844	0.000035	84.470	5.317069	1.00059708	2.826E-12
15D01912	2.4 % ✓	1.370991	0.003103	0.482732	0.005608	0.004227	0.000034	84.489	5.319038	1.00059721	2.876E-12
15D01913	2.5 % ✓	1.272248	0.003041	0.495693	0.005683	0.003863	0.000029	84.498	5.319987	1.00059728	2.661E-12
15D01914	2.6 % ✓	1.284124	0.002968	0.496515	0.005294	0.003898	0.000032	84.508	5.321009	1.00059735	2.785E-12
15D01916	2.7 % ✓	1.096979	0.002551	0.496381	0.004772	0.003290	0.000025	84.526	5.322907	1.00059747	2.725E-12
15D01918	2.8 % ✓	0.997940	0.002653	0.501989	0.005123	0.002975	0.000026	84.549	5.325317	1.00059764	2.320E-12
15D01919	2.9 % ✓	0.891682	0.003146	0.498853	0.006136	0.002633	0.000028	84.558	5.326266	1.00059770	1.687E-12
15D01921	3.0 % ✓	0.822268	0.002974	0.503829	0.005869	0.002409	0.000025	84.575	5.328093	1.00059782	1.635E-12
15D01922	3.2 % ✓	0.795294	0.002555	0.506999	0.005093	0.002340	0.000024	84.584	5.329043	1.00059789	1.852E-12
15D01923	3.4 % ✓	0.801094	0.002777	0.496734	0.005477	0.002349	0.000024	84.592	5.329920	1.00059794	1.715E-12
15D01925	3.6 % ✓	0.694164	0.001727	0.505436	0.003559	0.001951	0.000017	84.610	5.331748	1.00059807	2.435E-12
15D01926	3.8 % ✓	0.715500	0.002274	0.511519	0.004472	0.002012	0.000020	84.619	5.332699	1.00059813	1.872E-12
15D01927	4.0 % ✓	0.651862	0.001958	0.499454	0.004076	0.001832	0.000018	84.627	5.333577	1.00059819	1.969E-12
15D01929	4.3 % ✓	0.586816	0.001244	0.512487	0.002825	0.001586	0.000013	84.644	5.335406	1.00059831	2.874E-12
15D01930	4.6 % ✓	0.541476	0.001583	0.524132	0.003475	0.001434	0.000015	84.653	5.336358	1.00059838	2.022E-12
15D01931	4.9 % ✓	0.490201	0.001154	0.517178	0.002694	0.001276	0.000012	84.662	5.337236	1.00059843	2.565E-12
15D01933	5.2 % ✓	0.465912	0.001040	0.523470	0.002582	0.001208	0.000011	84.679	5.339067	1.00059856	2.694E-12
15D01934	5.5 % ✓	0.451570	0.001263	0.532779	0.002992	0.001168	0.000011	84.688	5.339946	1.00059862	2.122E-12
15D01935	5.8 % ✓	0.443738	0.001167	0.540994	0.002887	0.001134	0.000011	84.697	5.340898	1.00059868	2.243E-12
15D01937	6.1 % ✓	0.430657	0.001188	0.552675	0.002886	0.001109	0.000011	84.714	5.342730	1.00059880	2.152E-12
15D01938	6.5 % ✓	0.422099	0.001109	0.563452	0.002883	0.001074	0.000011	84.722	5.343609	1.00059886	2.239E-12
15D01939	7.0 % ✓	0.408844	0.001056	0.576179	0.002838	0.001035	0.000010	84.731	5.344562	1.00059892	2.297E-12
15D01941	7.6 % ✓	0.390646	0.000973	0.591479	0.002690	0.000984	0.000009	84.749	5.346395	1.00059905	2.369E-12
15D01942	8.4 %	0.379866	0.000829	0.619874	0.002649	0.000979	0.000008	84.757	5.347275	1.00059911	2.755E-12
15D01943	9.4 %	0.382613	0.000798	0.661299	0.002645	0.000994	0.000008	84.766	5.348229	1.00059917	2.903E-12
15D01945	10.5 %	0.407218	0.000884	0.733702	0.002971	0.001113	0.000009	84.783	5.350063	1.00059929	2.779E-12
15D01946	11.7 %	0.444015	0.000861	0.896512	0.003361	0.001296	0.000009	84.792	5.350944	1.00059935	3.185E-12
15D01947	13.1 %	0.511018	0.000899	1.062956	0.003843	0.001556	0.000010	84.801	5.351898	1.00059942	3.575E-12
15D01949	14.7 %	0.580527	0.001093	1.077210	0.004089	0.001822	0.000012	84.818	5.353734	1.00059954	3.334E-12
15D01950	16.5 %	0.632911	0.001156	1.387376	0.005045	0.002083	0.000014	84.826	5.354615	1.00059960	3.437E-12
15D01951	18.3 %	0.730491	0.001709	1.771670	0.006717	0.002530	0.000018	84.835	5.355570	1.00059966	2.608E-12
15D01953	20.2 %	0.787663	0.002294	2.058884	0.008256	0.002798	0.000022	84.853	5.357407	1.00059978	2.071E-12
15D01954	22.2 %	0.972267	0.002417	2.696424	0.010118	0.003594	0.000027	84.862	5.358362	1.00059985	2.487E-12
15D01956	24.5 %	1.032486	0.001966	3.237027	0.011403	0.003905	0.000024	84.880	5.360274	1.00059997	3.378E-12



Procedure Blanks		36Ar [fA]	1σ	37Ar [fA]	1σ	38Ar [fA]	1σ	39Ar [fA]	1σ	40Ar [fA]	1σ
15D01905	1.9 %	0.0106039	0.0005961	0.0335125	0.0300595	0.0499483	0.0271597	0.0152760	0.0249970	2.8689848	0.1135415
15D01906	2.0 %	0.0105167	0.0005961	0.0336999	0.0300595	0.0524023	0.0271597	0.0129417	0.0249970	2.8505289	0.1135415
15D01908	2.1 %	0.0103665	0.0005961	0.0339014	0.0300595	0.0565949	0.0271597	0.0090524	0.0249970	2.8188165	0.1135415
15D01909	2.2 %	0.0102920	0.0005961	0.0339372	0.0300595	0.0586550	0.0271597	0.0071940	0.0249970	2.8031363	0.1135415
15D01910	2.3 %	0.0102250	0.0005961	0.0339285	0.0300595	0.0604985	0.0271597	0.0055650	0.0249970	2.7890429	0.1135415
15D01912	2.4 %	0.0100922	0.0005961	0.0337812	0.0300595	0.0641131	0.0271597	0.0024794	0.0249970	2.7612082	0.1135415
15D01913	2.5 %	0.0100314	0.0005961	0.0336481	0.0300595	0.0657505	0.0271597	0.0011371	0.0249970	2.7484979	0.1135415
15D01914	2.6 %	0.0099681	0.0005961	0.0334596	0.0300595	0.0674388	0.0271597	0.0002043	0.0249970	2.7353124	0.1135415
15D01916	2.7 %	0.0098568	0.0005961	0.0329850	0.0300595	0.0703683	0.0271597	0.0024090	0.0249970	2.7122083	0.1135415
15D01918	2.8 %	0.0097272	0.0005961	0.0321497	0.0300595	0.0737006	0.0271597	0.0046705	0.0249970	2.6854730	0.1135415
15D01919	2.9 %	0.0096797	0.0005961	0.0317492	0.0300595	0.0748948	0.0271597	0.0053967	0.0249970	2.6757361	0.1135415
15D01921	3.0 %	0.0095941	0.0005961	0.0308652	0.0300595	0.0770030	0.0271597	0.0065312	0.0249970	2.6582747	0.1135415
15D01922	3.2 %	0.0095525	0.0005961	0.0303464	0.0300595	0.0780015	0.0271597	0.0069851	0.0249970	2.6498518	0.1135415
15D01923	3.4 %	0.0095159	0.0005961	0.0298317	0.0300595	0.0788636	0.0271597	0.0073213	0.0249970	2.6424757	0.1135415
15D01925	3.6 %	0.0094451	0.0005961	0.0286487	0.0300595	0.0804764	0.0271597	0.0077669	0.0249970	2.6283389	0.1135415
15D01926	3.8 %	0.0094113	0.0005961	0.0279745	0.0300595	0.0812172	0.0271597	0.0078625	0.0249970	2.6216447	0.1135415
15D01927	4.0 %	0.0093818	0.0005961	0.0273162	0.0300595	0.0818415	0.0271597	0.0078680	0.0249970	2.6158644	0.1135415
15D01929	4.3 %	0.0093260	0.0005961	0.0258342	0.0300595	0.0829589	0.0271597	0.0076246	0.0249970	2.6050522	0.1135415
15D01930	4.6 %	0.0092999	0.0005961	0.0250044	0.0300595	0.0834420	0.0271597	0.0073619	0.0249970	2.6000868	0.1135415
15D01931	4.9 %	0.0092776	0.0005961	0.0242026	0.0300595	0.0838285	0.0271597	0.0070367	0.0249970	2.5959023	0.1135415
15D01933	5.2 %	0.0092367	0.0005961	0.0224215	0.0300595	0.0844505	0.0271597	0.0061044	0.0249970	2.5884146	0.1135415
15D01934	5.5 %	0.0092197	0.0005961	0.0215135	0.0300595	0.0846610	0.0271597	0.0055345	0.0249970	2.5854110	0.1135415
15D01935	5.8 %	0.0092032	0.0005961	0.0204909	0.0300595	0.0848246	0.0271597	0.0048275	0.0249970	2.5825893	0.1135415
15D01937	6.1 %	0.0091772	0.0005961	0.0184108	0.0300595	0.0849511	0.0271597	0.0032061	0.0249970	2.5784263	0.1135415
15D01938	6.5 %	0.0091674	0.0005961	0.0173592	0.0300595	0.0849238	0.0271597	0.0023055	0.0249970	2.5770185	0.1135415
15D01939	7.0 %	0.0091587	0.0005961	0.0161811	0.0300595	0.0848299	0.0271597	0.0012403	0.0249970	2.5759256	0.1135415
15D01941	7.6 %	0.0091476	0.0005961	0.0138020	0.0300595	0.0844609	0.0271597	0.0010701	0.0249970	2.5750871	0.1135415
15D01942	8.4 %	0.0091449	0.0005961	0.0126069	0.0300595	0.0841958	0.0271597	0.0023014	0.0249970	2.5752751	0.1135415
15D01943	9.4 %	0.0091440	0.0005961	0.0112733	0.0300595	0.0838442	0.0271597	0.0037249	0.0249970	2.5759110	0.1135415
15D01945	10.5 %	0.0091478	0.0005961	0.0085951	0.0300595	0.0829797	0.0271597	0.0067242	0.0249970	2.5783971	0.1135415
15D01946	11.7 %	0.0091523	0.0005961	0.0072564	0.0300595	0.0824768	0.0271597	0.0082863	0.0249970	2.5801809	0.1135415
15D01947	13.1 %	0.0091591	0.0005961	0.0057674	0.0300595	0.0818676	0.0271597	0.0100680	0.0249970	2.5825456	0.1135415
15D01949	14.7 %	0.0091778	0.0005961	0.0027901	0.0300595	0.0805077	0.0271597	0.0137563	0.0249970	2.5883563	0.1135415
15D01950	16.5 %	0.0091895	0.0005961	0.0013079	0.0300595	0.0797669	0.0271597	0.0156491	0.0249970	2.5917359	0.1135415
15D01951	18.3 %	0.0092040	0.0005961	0.0003366	0.0300595	0.0789000	0.0271597	0.0177891	0.0249970	2.5958293	0.1135415
15D01953	20.2 %	0.0092377	0.0005961	0.0036129	0.0300595	0.0770447	0.0271597	0.0221664	0.0249970	2.6049647	0.1135415
15D01954	22.2 %	0.0092581	0.0005961	0.0053757	0.0300595	0.0759820	0.0271597	0.0245788	0.0249970	2.6103720	0.1135415
15D01956	24.5 %	0.0093051	0.0005961	0.0090225	0.0300595	0.0736557	0.0271597	0.0296829	0.0249970	2.6225350	0.1135415



OSU Argon Geochronology Lab																									
Intercept Values	36Ar					37Ar					38Ar					39Ar					40Ar				
		[fA]	1σ	r2			[fA]	1σ	r2			[fA]	1σ	r2			[fA]	1σ	r2			[fA]	1σ	r2	
15D01905	1.9 %	1.0023073	0.0021823	0.9001	EXP 150 of 150	6.4999	0.0325	0.5185	EXP 150 of 150	3.557767	0.026776	0.4138	EXP 150 of 150	75.9707	0.0329	0.9957	EXP 150 of 150	324.93682	0.04656	0.9980	EXP 150 of 150				
15D01906	2.0 %	0.5503875	0.0016402	0.7908	EXP 150 of 150	5.8290	0.0310	0.5042	EXP 150 of 150	2.562827	0.026191	0.2819	EXP 150 of 150	67.1772	0.0325	0.9946	EXP 150 of 150	182.57983	0.03879	0.9902	EXP 150 of 150				
15D01908	2.1 %	0.3105226	0.0013133	0.5143	EXP 150 of 150	4.2424	0.0295	0.2921	EXP 150 of 150	1.630287	0.023267	0.1896	EXP 150 of 150	48.5190	0.0294	0.9917	EXP 150 of 150	104.46704	0.03630	0.6731	EXP 150 of 150				
15D01909	2.2 %	0.2960623	0.0012544	0.5072	EXP 150 of 150	4.9498	0.0323	0.4318	EXP 150 of 150	1.607399	0.023985	0.2311	EXP 150 of 150	54.2620	0.0311	0.9924	EXP 150 of 150	99.91033	0.03555	0.4648	EXP 150 of 150				
15D01910	2.3 %	0.1835316	0.0009380	0.2872	EXP 150 of 150	3.4017	0.0312	0.1847	EXP 150 of 150	0.972562	0.028160	0.0221	EXP 150 of 150	37.7757	0.0241	0.9905	EXP 150 of 150	61.82029	0.03202	0.9454	EXP 150 of 150				
15D01912	2.4 %	0.1838625	0.0011483	0.2286	EXP 150 of 150	3.9235	0.0310	0.2417	EXP 150 of 150	0.987445	0.027025	0.0143	EXP 150 of 150	43.3978	0.0294	0.9894	EXP 150 of 150	62.84158	0.03098	0.9297	EXP 150 of 150				
15D01913	2.5 %	0.1683361	0.0008915	0.1944	EXP 150 of 150	4.0149	0.0316	0.3964	EXP 150 of 150	0.968581	0.026651	0.0752	EXP 150 of 150	43.2631	0.0268	0.9914	EXP 149 of 150	58.33038	0.03182	0.9473	EXP 150 of 150				
15D01914	2.6 %	0.1756487	0.0010823	0.1347	EXP 150 of 150	4.1685	0.0290	0.4445	EXP 150 of 150	0.957096	0.028295	0.1074	EXP 150 of 150	44.8670	0.0286	0.9908	EXP 150 of 150	60.91771	0.03311	0.9303	EXP 150 of 150				
15D01916	2.7 %	0.1700413	0.0009060	0.2167	EXP 150 of 150	4.7666	0.0302	0.4410	EXP 150 of 150	1.009977	0.029402	0.0654	EXP 150 of 150	51.3923	0.0283	0.9931	EXP 150 of 150	59.64630	0.03588	0.9176	EXP 150 of 150				
15D01918	2.8 %	0.1452241	0.0009483	0.1101	EXP 150 of 150	4.5092	0.0309	0.5101	EXP 150 of 150	0.859096	0.025044	0.0651	EXP 150 of 150	48.0829	0.0311	0.9908	EXP 150 of 150	51.14651	0.03050	0.9595	EXP 150 of 150				
15D01919	2.9 %	0.1072652	0.0007689	0.0089	EXP 150 of 150	3.6514	0.0304	0.3903	EXP 150 of 150	0.699324	0.026123	0.0538	EXP 150 of 150	39.1240	0.0279	0.9881	EXP 150 of 150	37.91028	0.02841	0.9825	EXP 150 of 150				
15D01921	3.0 %	0.1034525	0.0007058	0.0280	EXP 150 of 150	3.8721	0.0305	0.3131	EXP 150 of 150	0.677932	0.025309	0.0277	EXP 150 of 150	41.1226	0.0265	0.9906	EXP 150 of 150	36.81050	0.02962	0.9807	EXP 150 of 150				
15D01922	3.2 %	0.1163598	0.0008531	0.0570	EXP 150 of 150	4.5572	0.0305	0.4560	EXP 150 of 150	0.757376	0.026516	0.0207	EXP 150 of 150	48.1695	0.0299	0.9912	EXP 150 of 150	41.34162	0.02893	0.9769	EXP 148 of 150				
15D01923	3.4 %	0.1080519	0.0007608	0.0328	EXP 150 of 150	4.1061	0.0304	0.3276	EXP 150 of 150	0.667927	0.027422	0.0117	EXP 150 of 150	44.2769	0.0272	0.9913	EXP 150 of 150	38.46764	0.03171	0.9769	EXP 150 of 150				
15D01925	3.6 %	0.1435579	0.0009143	0.1071	EXP 150 of 150	6.8220	0.0295	0.6534	EXP 150 of 150	1.082443	0.027072	0.0273	EXP 149 of 150	72.5492	0.0335	0.9953	EXP 150 of 150	53.49073	0.03141	0.9533	EXP 149 of 150				
15D01926	3.8 %	0.1125356	0.0007616	0.0007	EXP 150 of 150	5.1548	0.0285	0.5332	EXP 150 of 150	0.794338	0.025783	0.0347	EXP 150 of 150	54.1085	0.0285	0.9936	EXP 150 of 150	41.72324	0.03244	0.9718	EXP 150 of 150				
15D01927	4.0 %	0.1178095	0.0008082	0.0467	EXP 150 of 150	5.8075	0.0308	0.4957	EXP 149 of 150	0.876580	0.025083	0.0163	EXP 150 of 150	62.4883	0.0292	0.9949	EXP 150 of 150	43.75593	0.02998	0.9744	EXP 150 of 150				
15D01929	4.3 %	0.1614942	0.0009338	0.1034	EXP 150 of 150	9.6370	0.0298	0.7903	EXP 150 of 150	1.488775	0.027259	0.1265	EXP 150 of 150	101.3023	0.0360	0.9971	EXP 150 of 150	62.64080	0.02933	0.9369	EXP 150 of 150				
15D01930	4.6 %	0.1142512	0.0008165	0.0020	EXP 150 of 150	7.5182	0.0307	0.7192	EXP 150 of 150	1.115020	0.027117	0.0654	EXP 150 of 150	77.2369	0.0307	0.9964	EXP 150 of 150	44.83789	0.03181	0.9698	EXP 150 of 150				
15D01931	4.9 %	0.1400683	0.0009467	0.0505	EXP 150 of 150	10.3826	0.0289	0.8168	EXP 150 of 150	1.520040	0.028448	0.0932	EXP 150 of 150	108.2267	0.0357	0.9976	EXP 150 of 150	56.17467	0.03359	0.9527	EXP 150 of 150				
15D01933	5.2 %	0.1461180	0.0009975	0.1035	EXP 150 of 150	11.6071	0.0300	0.8350	EXP 150 of 150	1.689111	0.029420	0.1225	EXP 150 of 150	119.6260	0.0329	0.9983	EXP 150 of 150	58.87535	0.03088	0.9513	EXP 148 of 150				
15D01934	5.5 %	0.1167312	0.0007911	0.0253	EXP 150 of 150	9.6010	0.0313	0.7565	EXP 150 of 150	1.366717	0.027991	0.1038	EXP 150 of 150	97.2074	0.0356	0.9970	EXP 150 of 150	46.91622	0.03354	0.9669	EXP 150 of 150				
15D01935	5.8 %	0.1215514	0.0007953	0.0001	EXP 150 of 150	10.4807	0.0319	0.7541	EXP 150 of 150	1.424677	0.026053	0.0639	EXP 149 of 150	104.5528	0.0335	0.9977	EXP 150 of 150	49.43569	0.02950	0.9735	EXP 150 of 150				
15D01937	6.1 %	0.1177067	0.0008142	0.0207	EXP 150 of 150	10.5783	0.0303	0.7712	EXP 150 of 150	1.453679	0.027561	0.0894	EXP 150 of 150	103.3550	0.0310	0.9980	EXP 150 of 150	47.52871	0.03448	0.9636	EXP 150 of 150				
15D01938	6.5 %	0.1208318	0.0008561	0.0028	EXP 150 of 150	11.4475	0.0330	0.7948	EXP 150 of 150	1.579337	0.028270	0.1063	EXP 150 of 150	109.7522	0.0307	0.9982	EXP 150 of 150	49.36049	0.02928	0.9735	EXP 150 of 150				
15D01939	7.0 %	0.1230701	0.0008093	0.0001	EXP 149 of 150	12.3905	0.0337	0.8025	EXP 150 of 150	1.573695	0.026034	0.0312	EXP 150 of 150	116.2151	0.0342	0.9980	EXP 150 of 150	50.55822	0.03201	0.9676	EXP 150 of 150				
15D01941	7.6 %	0.1260988	0.0007831	0.0159	EXP 150 of 150	13.7225	0.0305	0.8572	EXP 150 of 150	1.802550	0.024882	0.2039	EXP 150 of 150	125.4625	0.0365	0.9981	EXP 150 of 150	52.06875	0.02834	0.9720	EXP 149 of 150				
15D01942	8.4 %	0.1482994	0.0009045	0.1922	EXP 150 of 150	17.1888	0.0357	0.8793	EXP 150 of 150	2.142916	0.025556	0.0628	EXP 150 of 150	150.0216	0.0340	0.9988	EXP 150 of 150	60.12380	0.03153	0.9536	EXP 150 of 150				
15D01943	9.4 %	0.1569799	0.0009994	0.0803	EXP 150 of 150	19.1773	0.0312	0.9246	EXP 150 of 150	2.427208	0.025936	0.2366	EXP 150 of 150	156.9444	0.0377	0.9987	EXP 150 of 150	63.21477	0.03137	0.9498	EXP 150 of 150				
15D01945	10.5 %	0.1579659	0.0009339	0.1251	EXP 150 of 150	19.1309	0.0333	0.9137	EXP 150 of 150	2.222005	0.025940	0.1879	EXP 150 of 150	141.1859	0.0370	0.9984	EXP 150 of 150	60.63535	0.03129	0.9502	EXP 150 of 150				
15D01946	11.7 %	0.1913852	0.0010344	0.2397	EXP 150 of 150	24.5627	0.0317	0.9497	EXP 150 of 150	2.480348	0.029367	0.2140	EXP 150 of 150	148.4015	0.0360	0.9987	EXP 150 of 150	69.11796	0.03424	0.8972	EXP 150 of 150				
15D01947	13.1 %	0.2224522	0.0010269	0.2894	EXP 150 of 150	28.3933	0.0292	0.9669	EXP 150 of 150	2.525768	0.029106	0.2265	EXP 150 of 150	144.7247	0.0370	0.9985	EXP 150 of 150	77.26269	0.03283	0.8016	EXP 150 of 150				
15D01949	14.7 %	0.2142143	0.0010932	0.3869	EXP 150 of 150	23.6138	0.0321	0.9439	EXP 150 of 150	2.074342	0.028306	0.0664	EXP 149 of 150	118.8261	0.0356	0.9979	EXP 150 of 150	72.24142	0.03559	0.7993	EXP 150 of 150				
15D01950	16.5 %	0.2308519	0.0012389	0.3385	EXP 150 of 150	28.7528	0.0313	0.9642	EXP 150 of 150	2.173958	0.026765	0.2820	EXP 149 of 150	112.3691	0.0337	0.9979	EXP 150 of 150	74.40186	0.03238	0.7874	EXP 150 of 150				
15D01951	18.3 %	0.1862130	0.0009520	0.2476	EXP 150 of 150	24.1299	0.0317	0.9493	EXP 150 of 150	1.395033	0.026529	0.1025	EXP 150 of 150	73.8722	0.0306	0.9961	EXP 150 of 150	57.07719	0.03213	0.9441	EXP 150 of 150				







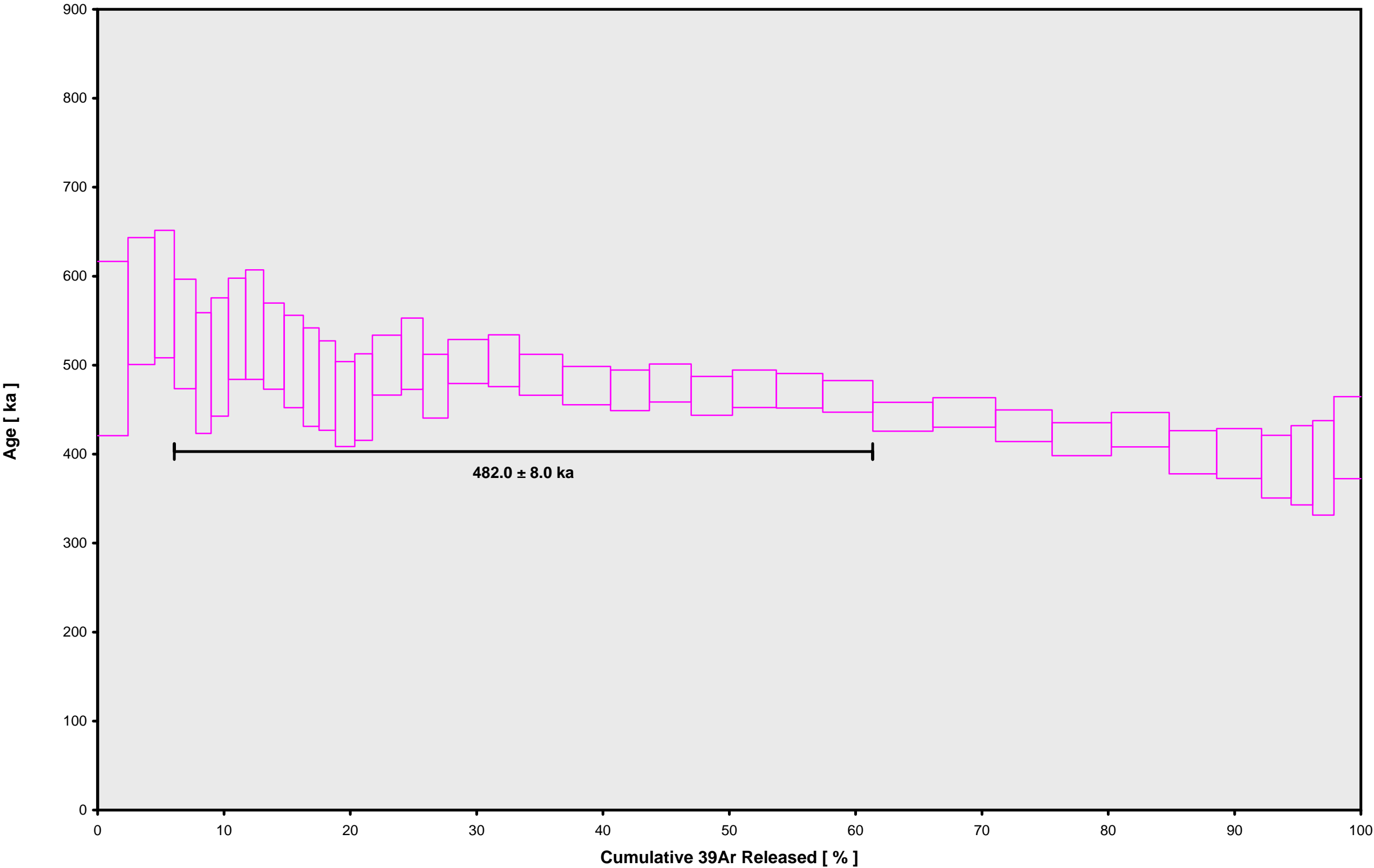
[illegible]



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
15D01905	1.9 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0	0.43	0	0	0	0	0	0	0	0	0	0	0	0	0
15D01906	2.0 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0	0.43	0	0	0	0	0	0	0	0	0	0	0	0	0
15D01908	2.1 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0	0.43	0	0	0	0	0	0	0	0	0	0	0	0	0
15D01909	2.2 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0	0.43	0	0	0	0	0	0	0	0	0	0	0	0	0
15D01910	2.3 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0	0.43	0	0	0	0	0	0	0	0	0	0	0	0	0
15D01912	2.4 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0	0.43	0	0	0	0	0	0	0	0	0	0	0	0	0
15D01913	2.5 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0	0.43	0	0	0	0	0	0	0	0	0	0	0	0	0
15D01914	2.6 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0	0.43	0	0	0	0	0	0	0	0	0	0	0	0	0
15D01916	2.7 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0	0.43	0	0	0	0	0	0	0	0	0	0	0	0	0
15D01918	2.8 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0	0.43	0	0	0	0	0	0	0	0	0	0	0	0	0
15D01919	2.9 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0	0.43	0	0	0	0	0	0	0	0	0	0	0	0	0
15D01921	3.0 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0	0.43	0	0	0	0	0	0	0	0	0	0	0	0	0
15D01922	3.2 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0	0.43	0	0	0	0	0	0	0	0	0	0	0	0	0
15D01923	3.4 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0	0.43	0	0	0	0	0	0	0	0	0	0	0	0	0
15D01925	3.6 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0	0.43	0	0	0	0	0	0	0	0	0	0	0	0	0
15D01926	3.8 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0	0.43	0	0	0	0	0	0	0	0	0	0	0	0	0
15D01927	4.0 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0	0.43	0	0	0	0	0	0	0	0	0	0	0	0	0
15D01929	4.3 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0	0.43	0	0	0	0	0	0	0	0	0	0	0	0	0
15D01930	4.6 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0	0.43	0	0	0	0	0	0	0	0	0	0	0	0	0
15D01931	4.9 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0	0.43	0	0	0	0	0	0	0	0	0	0	0	0	0
15D01933	5.2 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0	0.43	0	0	0	0	0	0	0	0	0	0	0	0	0
15D01934	5.5 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0	0.43	0	0	0	0	0	0	0	0	0	0	0	0	0
15D01935	5.8 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0	0.43	0	0	0	0	0	0	0	0	0	0	0	0	0
15D01937	6.1 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0	0.43	0	0	0	0	0	0	0	0	0	0	0	0	0
15D01938	6.5 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0	0.43	0	0	0	0	0	0	0	0	0	0	0	0	0
15D01939	7.0 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0	0.43	0	0	0	0	0	0	0	0	0	0	0	0	0
15D01941	7.6 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0	0.43	0	0	0	0	0	0	0	0	0	0	0	0	0
15D01942	8.4 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0	0.43	0	0	0	0	0	0	0	0	0	0	0	0	0
15D01943	9.4 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0	0.43	0	0	0	0	0	0	0	0	0	0	0	0	0
15D01945	10.5 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0	0.43	0	0	0	0	0	0	0	0	0	0	0	0	0
15D01946	11.7 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0	0.43	0	0	0	0	0	0	0	0	0	0	0	0	0
15D01947	13.1 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0	0.43	0	0	0	0	0	0	0	0	0	0	0	0	0
15D01949	14.7 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0	0.43	0	0	0	0	0	0	0	0	0	0	0	0	0
15D01950	16.5 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0	0.43	0	0	0	0	0	0	0	0	0	0	0	0	0
15D01951	18.3 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0	0.43	0	0	0	0	0	0	0	0	0	0	0	0	0
15D01953	20.2 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0	0.43	0	0	0	0	0	0	0	0	0	0	0	0	0
15D01954	22.2 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0	0.43	0	0	0	0	0	0	0	0	0	0	0	0	0
15D01956	24.5 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0	0.43	0	0	0	0	0	0	0	0	0	0	0	0	0



15D01904.AGE >>> 1180180-2 >>> KERGUELEN | FALLOON (14-PIL-01) PROJECT



Ar-Ages in ka

WEIGHTED PLATEAU

482.0 ± 8.0

TOTAL FUSION

465.4 ± 6.0

NORMAL ISOCHRON

461.1 ± 12.0

INVERSE ISOCHRON

461.2 ± 12.0

MSWD (PROBABILITY)

1.57 (4%)

Sample Info

Groundmass

Kerguelen Plateau

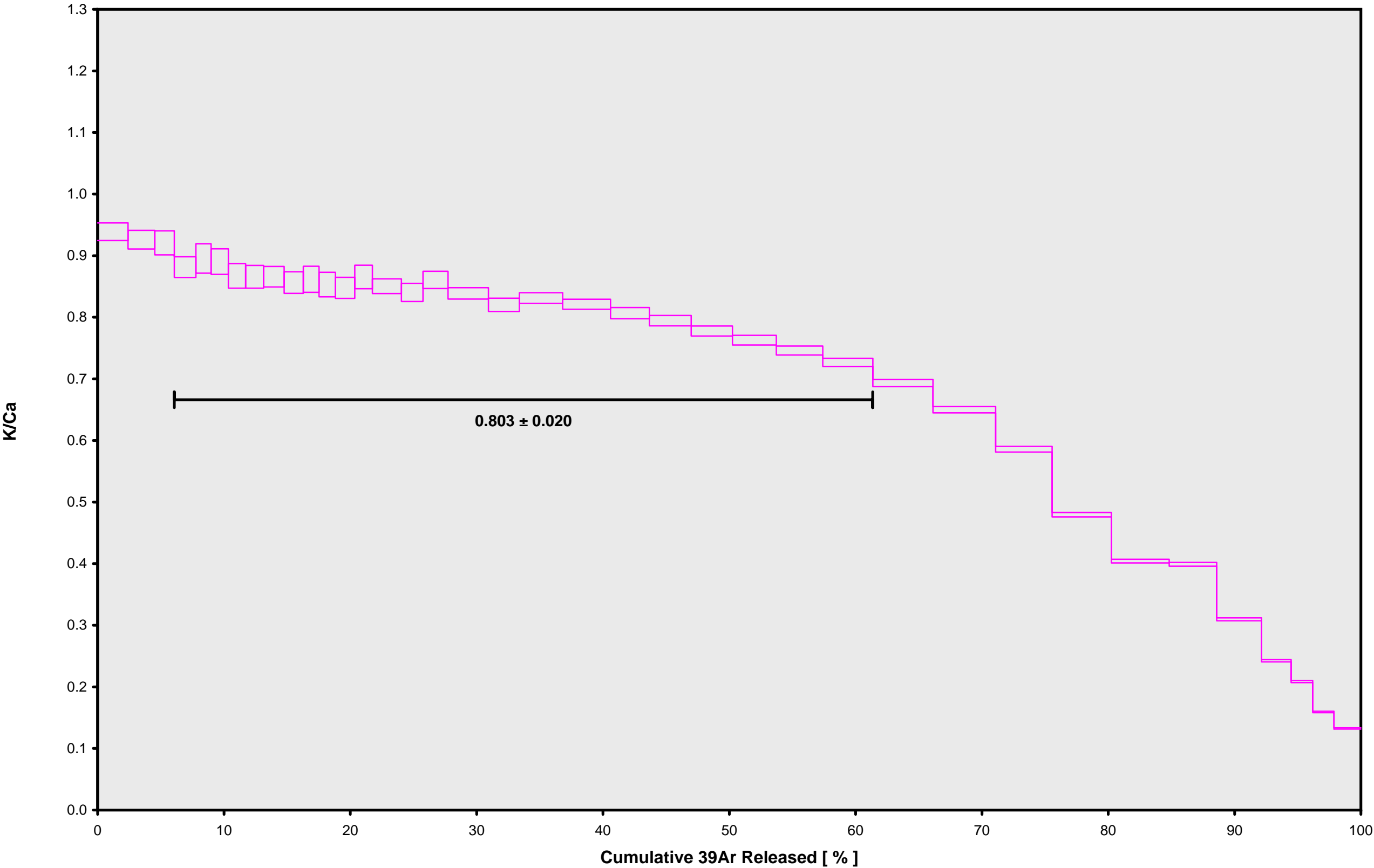
Dan Miggins

IRR = 14-OSU-06 (6C11-14)

J = 0.00177095 ± 0.00000427

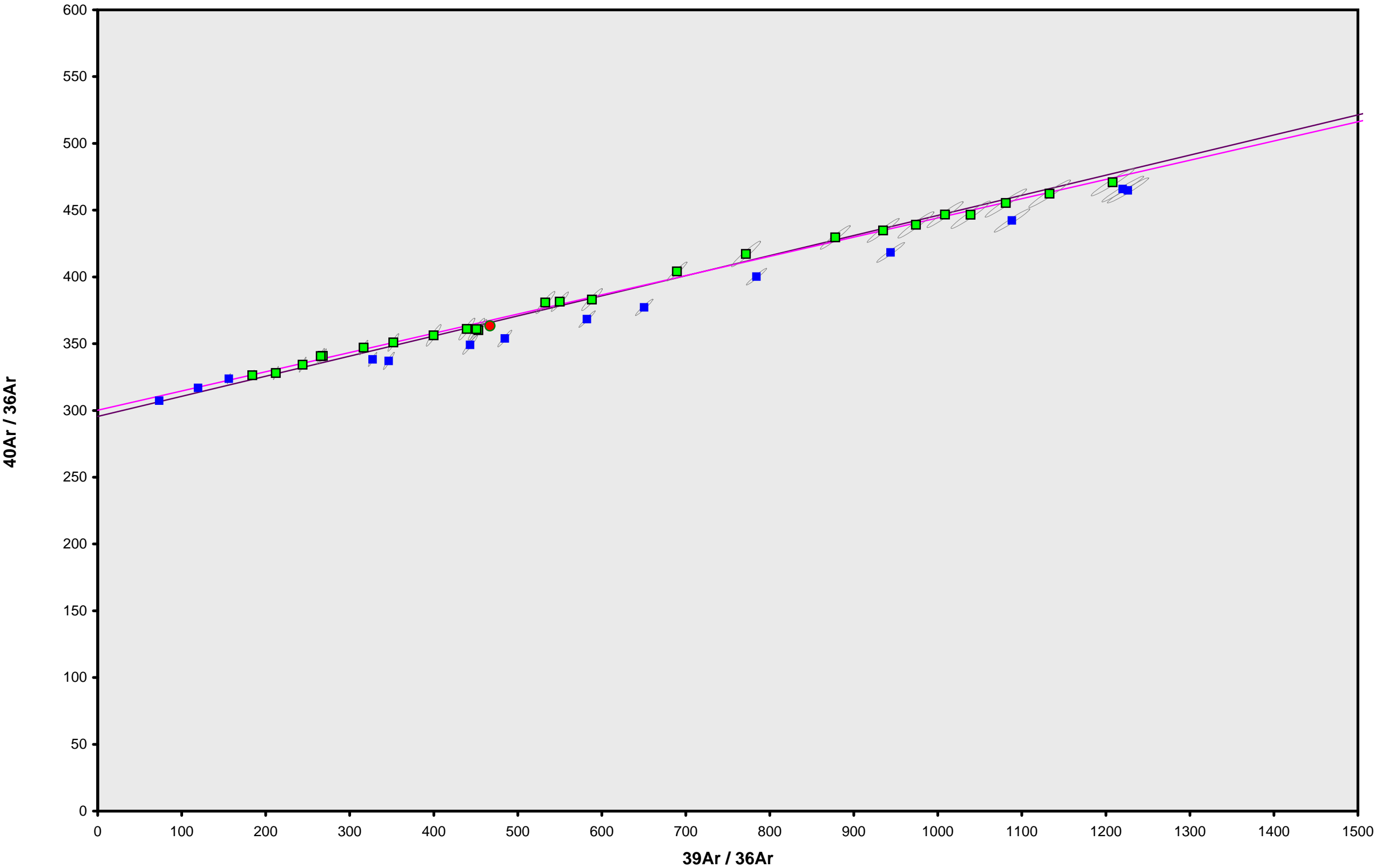


15D01904.AGE >>> 1180180-2 >>> KERGUELEN | FALLOON (14-PIL-01) PROJECT





15D01904.AGE >>> 1180180-2 >>> KERGUELEN | FALLOON (14-PIL-01) PROJECT



Ar-Ages in ka

WEIGHTED PLATEAU

$482.0 \pm 8.0$

TOTAL FUSION

$465.4 \pm 6.0$

NORMAL ISOCHRON

$461.1 \pm 12.0$

INVERSE ISOCHRON

$461.2 \pm 12.0$

MSWD (PROBABILITY)

0.85 (66%)

40AR/36AR INTERCEPT

$300.2 \pm 2.3$

Sample Info

Groundmass

Kerguelen Plateau

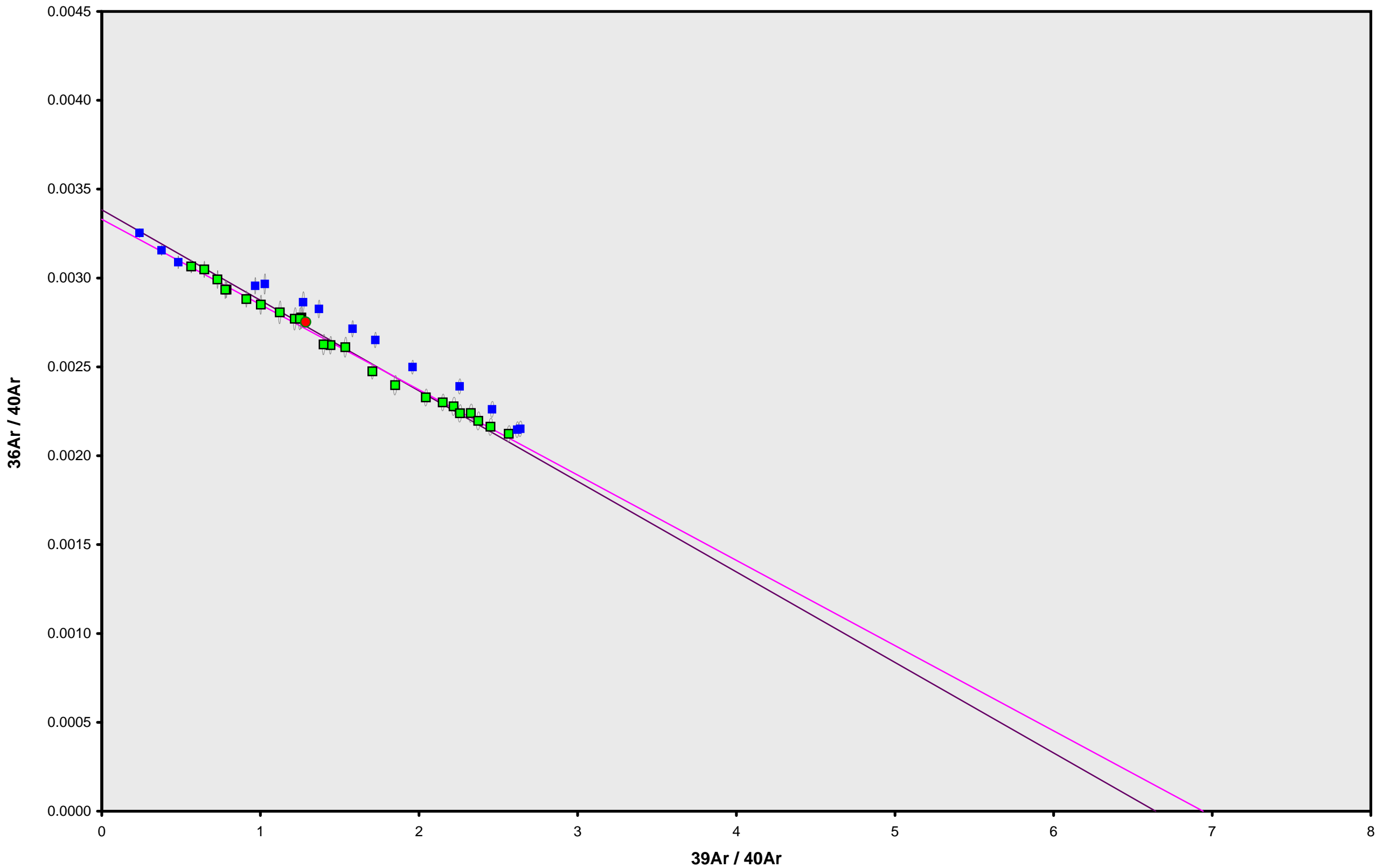
Dan Miggins

IRR = 14-OSU-06 (6C11-14)

J =  $0.00177095 \pm 0.00000427$



15D01904.AGE >>> 1180180-2 >>> KERGUELEN | FALLOON (14-PIL-01) PROJECT



**Ar-Ages in ka**

**WEIGHTED PLATEAU**  
482.0 ± 8.0

**TOTAL FUSION**  
465.4 ± 6.0

**NORMAL ISOCHRON**  
461.1 ± 12.0

**INVERSE ISOCHRON**  
461.2 ± 12.0

**MSWD (PROBABILITY)**  
0.86 (66%)

**SPREADING FACTOR**  
28.8%

**40AR/36AR INTERCEPT**  
300.2 ± 2.3

**Sample Info**

Groundmass  
Kerguelen Plateau  
Dan Miggins

IRR = 14-OSU-06 (6C11-14)  
J = 0.00177095 ± 0.00000427



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
15D01853	1.9 %	0.3973188	12.4968	0.975693	47.4565	343.3211	22.88 ± 0.09	74.51	3.89	1.633 ± 0.058
15D01854	2.0 %	✓ 0.2882016	13.3313	0.844936	44.5781	318.6650	22.61 ± 0.09	78.90	3.66	1.438 ± 0.048
15D01856	2.1 %	✓ 0.1978878	12.1537	0.699894	37.0988	264.5070	22.55 ± 0.09	81.89	3.04	1.313 ± 0.049
15D01857	2.2 %	✓ 0.1142561	7.5558	0.445527	23.5127	167.1418	22.48 ± 0.12	83.18	1.93	1.338 ± 0.082
15D01858	2.3 %	✓ 0.1219907	10.6715	0.599809	27.1343	193.4296	22.54 ± 0.11	84.28	2.23	1.093 ± 0.048
15D01860	2.4 %	✓ 0.1322589	14.2548	0.612989	32.1551	229.5627	22.58 ± 0.09	85.44	2.64	0.970 ± 0.032
15D01861	2.5 %	✓ 0.1060300	13.7931	0.509398	27.8384	197.0286	22.38 ± 0.10	86.27	2.28	0.868 ± 0.028
15D01862	2.6 %	✓ 0.0992375	14.8697	0.508693	27.6970	196.8079	22.47 ± 0.10	87.02	2.27	0.801 ± 0.025
15D01864	2.7 %	✓ 0.0711196	11.2764	0.361592	20.9025	148.5006	22.47 ± 0.13	87.59	1.71	0.797 ± 0.032
15D01865	2.8 %	✓ 0.0874467	17.4678	0.484346	26.7135	188.8622	22.36 ± 0.10	87.95	2.19	0.658 ± 0.017
15D01866	2.9 %	✓ 0.0616576	13.1979	0.409177	20.1191	141.2822	22.21 ± 0.13	88.57	1.65	0.656 ± 0.022
15D01868	3.0 %	✓ 0.0640833	16.0510	0.406047	21.3199	150.1111	22.27 ± 0.12	88.79	1.75	0.571 ± 0.017
15D01869	3.2 %	✓ 0.0773281	23.7799	0.482897	27.5707	194.3699	22.30 ± 0.09	89.47	2.26	0.499 ± 0.010
15D01870	3.4 %	✓ 0.0749275	27.4993	0.381729	28.7696	202.6965	22.28 ± 0.09	90.14	2.36	0.450 ± 0.008
15D01872	3.6 %	✓ 0.0789727	34.4106	0.442750	31.4229	220.6457	22.21 ± 0.09	90.42	2.58	0.393 ± 0.006
15D01873	3.8 %	✓ 0.0508509	22.4057	0.316497	20.8721	146.5738	22.21 ± 0.12	90.69	1.71	0.401 ± 0.009
15D01874	4.0 %	✓ 0.0568277	31.1684	0.334861	25.1170	175.5702	22.11 ± 0.10	91.26	2.06	0.347 ± 0.006
15D01876	4.3 %	0.0739505	53.8111	0.400082	35.8609	248.7340	21.94 ± 0.08	91.91	2.94	0.287 ± 0.003
15D01877	4.6 %	0.0519500	37.8527	0.348547	25.1258	174.5140	21.97 ± 0.10	91.90	2.06	0.285 ± 0.004
15D01878	4.9 %	0.0749850	81.4303	0.415041	42.8868	295.9029	21.82 ± 0.07	93.02	3.52	0.226 ± 0.002
15D01880	5.2 %	0.0665489	80.8760	0.359616	39.1178	267.4889	21.63 ± 0.07	93.14	3.21	0.208 ± 0.002
15D01881	5.5 %	0.0482431	63.2422	0.254760	29.0063	198.1519	21.61 ± 0.09	93.28	2.38	0.197 ± 0.002
15D01882	5.8 %	0.0624926	104.8632	0.337256	41.4070	279.9479	21.39 ± 0.07	93.80	3.40	0.170 ± 0.001
15D01884	6.1 %	0.0585240	113.4551	0.326480	40.4916	270.5591	21.14 ± 0.07	93.98	3.32	0.153 ± 0.001
15D01885	6.5 %	0.0468189	99.1728	0.254088	33.3479	220.0776	20.88 ± 0.08	94.07	2.74	0.145 ± 0.001
15D01886	7.0 %	0.0470120	119.5953	0.234197	36.0958	237.2200	20.79 ± 0.07	94.45	2.96	0.130 ± 0.001
15D01888	7.6 %	0.0523912	157.2168	0.276994	42.7855	278.4527	20.59 ± 0.07	94.72	3.51	0.117 ± 0.001
15D01889	8.4 %	0.0605513	206.9285	0.282001	50.7810	325.1432	20.26 ± 0.06	94.77	4.17	0.106 ± 0.001
15D01890	9.4 %	0.0639581	258.6648	0.377272	56.2163	357.7510	20.14 ± 0.06	94.97	4.61	0.093 ± 0.001
15D01892	10.5 %	0.0645097	287.8211	0.408310	55.7765	347.7203	19.73 ± 0.06	94.79	4.58	0.083 ± 0.001
15D01893	11.7 %	0.0583588	278.5866	0.319597	47.9706	296.1618	19.54 ± 0.06	94.48	3.94	0.074 ± 0.001
15D01894	13.1 %	0.0515115	272.0221	0.303092	42.7521	257.7079	19.08 ± 0.07	94.41	3.51	0.068 ± 0.000
15D01896	14.7 %	0.0475017	246.4882	0.308583	35.8259	209.4827	18.51 ± 0.07	93.70	2.94	0.062 ± 0.000
15D01897	16.5 %	0.0436479	200.7592	0.222424	26.9452	150.5190	17.69 ± 0.09	92.09	2.21	0.058 ± 0.000
15D01898	18.3 %	0.0397150	165.5275	0.150672	18.9798	100.4409	16.76 ± 0.12	89.52	1.56	0.049 ± 0.000
15D01900	20.2 %	0.0396244	168.1492	0.136786	13.3606	64.8476	15.38 ± 0.16	84.69	1.10	0.034 ± 0.000
15D01901	22.2 %	0.0408632	195.5229	0.028002	8.6382	40.6890	14.93 ± 0.26	77.10	0.71	0.019 ± 0.000
15D01903	24.5 %	0.0417607	225.5422	0.000000	5.1899	25.0566	15.30 ± 0.45	66.99	0.43	0.010 ± 0.000

Σ 3.2153139 3713.9117 14.560633 1218.8397 8125.6450

Information on Analysis	Results	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD	39Ar(k) (%,n)	K/Ca ± 2σ
Sample = 203-1 Material = Groundmass Location = Kerguelen Plateau Analyst = Dan Miggins Project = KERGUELEN   FALLOON (14- Mass Discrimination Law = LIN Irradiation = 14-OSU-06 (6C12-14) J = 0.00175976 ± 0.00000421 FCT-NM = 28.201 ± 0.023 Ma	Age Plateau Error Mean	7.07772 ± 0.02529 ± 0.36%	22.38 ± 0.13 ± 0.59%	9.76 0%	36.33 16	0.447 ± 0.078
			Full External Error ± 0.52 Analytical Error ± 0.08	1.73 3.1248	2σ Confidence Limit Error Magnification	
	Total Fusion Age	6.66671 ± 0.00455 ± 0.07%	21.09 ± 0.10 ± 0.48%		38	0.141 ± 0.000
			Full External Error ± 0.49 Analytical Error ± 0.01			



Normal Isochron		39(k)/36(a) ± 2σ		40(a+r)/36(a) ± 2σ	r.i.
15D01853	1.9 %		119.44 ± 1.25	1159.59 ± 11.87	0.9774
15D01854	2.0 %	✓	154.68 ± 1.91	1401.20 ± 17.05	0.9826
15D01856	2.1 %	✓	187.47 ± 2.64	1632.15 ± 22.67	0.9834
15D01857	2.2 %	✓	205.79 ± 3.93	1758.37 ± 33.09	0.9819
15D01858	2.3 %	✓	222.43 ± 4.21	1881.11 ± 35.20	0.9861
15D01860	2.4 %	✓	243.12 ± 4.07	2031.21 ± 33.56	0.9849
15D01861	2.5 %	✓	262.55 ± 5.49	2153.73 ± 44.59	0.9881
15D01862	2.6 %	✓	279.10 ± 5.80	2278.70 ± 46.80	0.9870
15D01864	2.7 %	✓	293.91 ± 8.32	2383.54 ± 66.93	0.9897
15D01865	2.8 %	✓	305.48 ± 6.92	2455.24 ± 55.20	0.9900
15D01866	2.9 %	✓	326.30 ± 10.16	2586.90 ± 79.96	0.9908
15D01868	3.0 %	✓	332.69 ± 9.66	2637.94 ± 76.03	0.9907
15D01869	3.2 %	✓	356.54 ± 8.47	2809.07 ± 66.26	0.9914
15D01870	3.4 %	✓	383.97 ± 10.15	3000.74 ± 78.93	0.9934
15D01872	3.6 %	✓	397.90 ± 9.95	3089.45 ± 76.85	0.9934
15D01873	3.8 %	✓	410.46 ± 13.96	3177.92 ± 107.46	0.9928
15D01874	4.0 %	✓	441.99 ± 14.40	3385.02 ± 109.79	0.9946
15D01876	4.3 %		484.93 ± 13.63	3659.02 ± 102.51	0.9957
15D01877	4.6 %		483.65 ± 16.53	3654.77 ± 124.45	0.9951
15D01878	4.9 %		571.94 ± 14.73	4241.66 ± 108.87	0.9957
15D01880	5.2 %		587.80 ± 17.81	4314.93 ± 130.36	0.9967
15D01881	5.5 %		601.25 ± 21.92	4402.86 ± 160.05	0.9964
15D01882	5.8 %		662.59 ± 21.37	4775.20 ± 153.69	0.9973
15D01884	6.1 %		691.88 ± 23.62	4918.54 ± 167.55	0.9973
15D01885	6.5 %		712.27 ± 27.66	4996.11 ± 193.62	0.9974
15D01886	7.0 %		767.80 ± 29.62	5341.45 ± 205.68	0.9977
15D01888	7.6 %		816.66 ± 32.56	5610.38 ± 223.33	0.9982
15D01889	8.4 %		838.64 ± 31.21	5665.21 ± 210.55	0.9984
15D01890	9.4 %		878.96 ± 33.47	5889.02 ± 223.95	0.9985
15D01892	10.5 %		864.62 ± 31.30	5685.70 ± 205.54	0.9984
15D01893	11.7 %		821.99 ± 30.60	5370.34 ± 199.58	0.9981
15D01894	13.1 %		829.95 ± 36.17	5298.42 ± 230.61	0.9985
15D01896	14.7 %		754.20 ± 33.75	4705.50 ± 210.27	0.9982
15D01897	16.5 %		617.33 ± 29.20	3743.98 ± 176.82	0.9976
15D01898	18.3 %		477.90 ± 22.52	2824.54 ± 132.70	0.9954
15D01900	20.2 %		337.18 ± 16.05	1932.06 ± 91.49	0.9915
15D01901	22.2 %		211.39 ± 10.38	1291.24 ± 62.69	0.9821
15D01903	24.5 %		124.28 ± 6.51	895.51 ± 45.35	0.9566

Results	40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD
Normal Isochron Error Chron	332.24 ± 10.37 ± 3.12%	6.94161 ± 0.04007 ± 0.58%	21.96 ± 0.16 ± 0.74%	2.16 1%
			Full External Error ± 0.52 Analytical Error ± 0.13	
Statistics	2σ Confidence Limit Error Magnification Number of Data Points	1.76 1.4690 16	Convergence Number of Iterations Calculated Line	0.000067967287 79 Weighted York-2



Inverse Isochron		39(k)/40(a+r) ± 2σ		36(a)/40(a+r) ± 2σ	r.i.
15D01853	1.9 %		0.1030031 ± 0.0002274	0.00086237 ± 0.00000883	0.0102
15D01854	2.0 %	✓	0.1103886 ± 0.0002532	0.00071367 ± 0.00000869	0.0107
15D01856	2.1 %	✓	0.1148631 ± 0.0002940	0.00061269 ± 0.00000851	0.0126
15D01857	2.2 %	✓	0.1170341 ± 0.0004236	0.00056871 ± 0.00001070	0.0156
15D01858	2.3 %	✓	0.1182437 ± 0.0003723	0.00053160 ± 0.00000995	0.0138
15D01860	2.4 %	✓	0.1196934 ± 0.0003474	0.00049232 ± 0.00000813	0.0132
15D01861	2.5 %	✓	0.1219056 ± 0.0003926	0.00046431 ± 0.00000961	0.0129
15D01862	2.6 %	✓	0.1224813 ± 0.0004095	0.00043885 ± 0.00000901	0.0123
15D01864	2.7 %	✓	0.1233068 ± 0.0005001	0.00041954 ± 0.00001178	0.0136
15D01865	2.8 %	✓	0.1244207 ± 0.0003971	0.00040729 ± 0.00000916	0.0134
15D01866	2.9 %	✓	0.1261369 ± 0.0005319	0.00038656 ± 0.00001195	0.0127
15D01868	3.0 %	✓	0.1261178 ± 0.0004989	0.00037908 ± 0.00001093	0.0134
15D01869	3.2 %	✓	0.1269249 ± 0.0003944	0.00035599 ± 0.00000840	0.0130
15D01870	3.4 %	✓	0.1279572 ± 0.0003890	0.00033325 ± 0.00000877	0.0106
15D01872	3.6 %	✓	0.1287917 ± 0.0003689	0.00032368 ± 0.00000805	0.0104
15D01873	3.8 %	✓	0.1291588 ± 0.0005274	0.00031467 ± 0.00001064	0.0119
15D01874	4.0 %	✓	0.1305713 ± 0.0004403	0.00029542 ± 0.00000958	0.0108
15D01876	4.3 %		0.1325302 ± 0.0003458	0.00027330 ± 0.00000766	0.0083
15D01877	4.6 %		0.1323349 ± 0.0004459	0.00027361 ± 0.00000932	0.0102
15D01878	4.9 %		0.1348384 ± 0.0003226	0.00023576 ± 0.00000605	0.0076
15D01880	5.2 %		0.1362256 ± 0.0003335	0.00023175 ± 0.00000700	0.0073
15D01881	5.5 %		0.1365595 ± 0.0004246	0.00022712 ± 0.00000826	0.0087
15D01882	5.8 %		0.1387566 ± 0.0003291	0.00020942 ± 0.00000674	0.0067
15D01884	6.1 %		0.1406676 ± 0.0003500	0.00020331 ± 0.00000693	0.0067
15D01885	6.5 %		0.1425658 ± 0.0003981	0.00020016 ± 0.00000776	0.0076
15D01886	7.0 %		0.1437439 ± 0.0003768	0.00018722 ± 0.00000721	0.0072
15D01888	7.6 %		0.1455615 ± 0.0003487	0.00017824 ± 0.00000710	0.0060
15D01889	8.4 %		0.1480341 ± 0.0003151	0.00017652 ± 0.00000656	0.0052
15D01890	9.4 %		0.1492532 ± 0.0003103	0.00016981 ± 0.00000646	0.0042
15D01892	10.5 %		0.1520695 ± 0.0003099	0.00017588 ± 0.00000636	0.0049
15D01893	11.7 %		0.1530618 ± 0.0003529	0.00018621 ± 0.00000692	0.0056
15D01894	13.1 %		0.1566415 ± 0.0003738	0.00018874 ± 0.00000821	0.0057
15D01896	14.7 %		0.1602807 ± 0.0004259	0.00021252 ± 0.00000950	0.0074
15D01897	16.5 %		0.1648862 ± 0.0005421	0.00026710 ± 0.00001261	0.0104
15D01898	18.3 %		0.1691960 ± 0.0007609	0.00035404 ± 0.00001663	0.0164
15D01900	20.2 %		0.1745196 ± 0.0010788	0.00051758 ± 0.00002451	0.0244
15D01901	22.2 %		0.1637132 ± 0.0015155	0.00077445 ± 0.00003760	0.0328
15D01903	24.5 %		0.1387802 ± 0.0021184	0.00111669 ± 0.00005656	0.0373

Results	40(a)/36(a) ± 2σ		40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD
Inverse Isochron Error Chron	331.73 ± 10.46 ± 3.15%		6.94437 ± 0.04041 ± 0.58%	21.96 ± 0.16 ± 0.75%	2.17 1%
				Full External Error ± 0.52 Analytical Error ± 0.13	
Statistics	2σ Confidence Limit	1.76	Convergence		0.0000082644
	Error Magnification	1.4725	Number of Iterations		3
	Number of Data Points	16	Calculated Line		Weighted York-2
	Spreading Factor	14.0%			



OSU Argon Geochronology Lab																
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
15D01853	1.9 %															
15D01854	2.0 %	✓														
15D01856	2.1 %	✓														
15D01857	2.2 %	✓														
15D01858	2.3 %	✓														
15D01860	2.4 %	✓														
15D01861	2.5 %	✓														
15D01862	2.6 %	✓														
15D01864	2.7 %	✓														
15D01865	2.8 %	✓														
15D01866	2.9 %	✓														
15D01868	3.0 %	✓														
15D01869	3.2 %	✓														
15D01870	3.4 %	✓														
15D01872	3.6 %	✓														
15D01873	3.8 %	✓														
15D01874	4.0 %	✓														
15D01876	4.3 %															
15D01877	4.6 %															
15D01878	4.9 %															
15D01880	5.2 %															
15D01881	5.5 %															
15D01882	5.8 %															
15D01884	6.1 %															
15D01885	6.5 %															
15D01886	7.0 %															
15D01888	7.6 %															
15D01889	8.4 %															
15D01890	9.4 %															
15D01892	10.5 %															
15D01893	11.7 %															
15D01894	13.1 %															
15D01896	14.7 %															
15D01897	16.5 %															
15D01898	18.3 %															
15D01900	20.2 %															
15D01901	22.2 %															
15D01903	24.5 %															
Σ		4.1977755	0.158	3713.9117	0.081	29.050451	0.881	1221.3392	0.022	9077.0013	0.007					

Information on Analysis and Constants Used in Calculations		Results						
		40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD	39Ar(k) (% ,n)	K/Ca ± 2σ	
Sample = 203-1	Age Equations = Min et al. (2000)							
Material = Groundmass	Negative Intensities = Allowed							
Location = Kerguelen Plateau	Decay Constant 40K = 5.530 ± 0.048 E-10 1/a		7.07772 ± 0.02529 ± 0.36%	22.38 ± 0.13 ± 0.59%	9.76	36.33	0.447 ± 0.078	
Analyst = Dan Miggins	Decay Constant 39Ar = 2.940 ± 0.016 E-07 1/h				0%	16		
Project = KERQUELEN   FALLOON (14-PIL-01)	Decay Constant 37Ar = 8.230 ± 0.012 E-04 1/h				1.73	2σ Confidence Limit		
Mass Discrimination Law = LIN	Decay Constant 36Cl = 2.257 ± 0.015 E-06 1/a				3.1248	Error Magnification		
Irradiation = 14-OSU-06 (6C12-14)	Decay Constant 40K(EC,β <sup>+</sup> ) = 0.580 ± 0.009 E-10 1/a							
J = 0.00175976 ± 0.00000421	Decay Constant 40K(β <sup>-</sup> ) = 4.950 ± 0.043 E-10 1/a							
FCT-NM = 28.201 ± 0.023 Ma	Atmospheric Ratio 40/36(a) = 295.50							
IGSN = Undefined	Atmospheric Ratio 38/36(a) = 0.1869							
Preferred Age = Undefined	Production Ratio 39/37(ca) = 0.000673							
Classification = Undefined	Production Ratio 38/37(ca) = 0.000014							
Experiment Type = Incremental Heating	Production Ratio 36/37(ca) = 0.000264							
Extraction Method = Undefined	Production Ratio 40/39(k) = 0.001010							
Heating = 77 sec	Production Ratio 38/39(k) = 0.011380							
Isolation = 6.00 min	Production Ratio 36/38(cl) = 262.80 ± 1.71							
Instrument = ARGUS-VI-D	Scaling Ratio K/Ca = 0.430							
Lithology = Undefined	Abundance Ratio 40K/K = 1.1700 ± 0.0100 E-04							
Lat-Lon = Undefined - Undefined	Atomic Weight K = 39.0983 ± 0.0001 g							
Collector Calibrations = 40Ar 36Ar								
</								



OSU Argon Geochronology Lab																																	
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
15D01853	1.9 %	0.3973188	0.51	0.0000000	0.00	0.0032992	1.77	0.0001330	4.35	12.4968	1.77	0.0742589	0.51	0.0000000	0.00	0.540055	0.11	0.0001737	1.77	0.975693	4.45	47.4565	0.11	0.0084103	1.77	343.3211	0.18	117.40772	0.51	0.0000000	0.00	0.0479310	0.11
15D01854	2.0 %	✓ 0.2882016	0.61	0.0000000	0.00	0.0035195	1.68	0.0001152	4.94	13.3313	1.68	0.0538649	0.61	0.0000000	0.00	0.507298	0.11	0.0001853	1.68	0.844936	5.02	44.5781	0.11	0.0089719	1.68	318.6650	0.17	85.16357	0.61	0.0000000	0.00	0.0450238	0.11
15D01856	2.1 %	✓ 0.1978878	0.69	0.0000000	0.00	0.0032086	1.86	0.0000954	5.92	12.1537	1.86	0.0369852	0.69	0.0000000	0.00	0.422184	0.12	0.0001689	1.86	0.699894	5.99	37.0988	0.12	0.0081794	1.86	264.5070	0.16	58.47585	0.69	0.0000000	0.00	0.0374698	0.12
15D01857	2.2 %	✓ 0.1142561	0.94	0.0000000	0.00	0.0019947	3.07	0.0000608	8.98	7.5558	3.07	0.0213545	0.94	0.0000000	0.00	0.267574	0.17	0.0001050	3.07	0.445527	9.03	23.5127	0.17	0.0050850	3.07	167.1418	0.20	33.76268	0.94	0.0000000	0.00	0.0237478	0.17
15D01858	2.3 %	✓ 0.1219907	0.93	0.0000000	0.00	0.0028173	2.18	0.0000818	7.02	10.6715	2.18	0.0228001	0.93	0.0000000	0.00	0.308788	0.15	0.0001483	2.18	0.599809	7.08	27.1343	0.15	0.0071819	2.18	193.4296	0.18	36.04826	0.93	0.0000000	0.00	0.0274056	0.15
15D01860	2.4 %	✓ 0.1322589	0.83	0.0000000	0.00	0.0037633	1.62	0.0000836	6.64	14.2548	1.62	0.0247192	0.83	0.0000000	0.00	0.365925	0.14	0.0001981	1.62	0.612989	6.70	32.1551	0.14	0.0095935	1.62	229.5627	0.15	39.08250	0.83	0.0000000	0.00	0.0324766	0.14
15D01861	2.5 %	✓ 0.1060300	1.03	0.0000000	0.00	0.0036414	1.63	0.0000695	8.19	13.7931	1.63	0.0198170	1.03	0.0000000	0.00	0.316801	0.15	0.0001917	1.63	0.509398	8.24	27.8384	0.15	0.0092828	1.63	197.0286	0.17	31.33188	1.03	0.0000000	0.00	0.0281168	0.15
15D01862	2.6 %	✓ 0.0992375	1.03	0.0000000	0.00	0.0039256	1.57	0.0000694	8.50	14.8697	1.57	0.0185475	1.03	0.0000000	0.00	0.315192	0.16	0.0002067	1.57	0.508693	8.55	27.6970	0.16	0.0100073	1.57	196.8079	0.16	29.32469	1.03	0.0000000	0.00	0.0279740	0.16
15D01864	2.7 %	✓ 0.0711196	1.40	0.0000000	0.00	0.0029770	1.97	0.0000494	11.15	11.2764	1.97	0.0132922	1.40	0.0000000	0.00	0.237871	0.19	0.0001567	1.97	0.361592	11.18	20.9025	0.19	0.0075890	1.97	148.5006	0.21	21.01583	1.40	0.0000000	0.00	0.0211115	0.19
15D01865	2.8 %	✓ 0.0874467	1.12	0.0000000	0.00	0.0046115	1.29	0.0000661	8.68	17.4678	1.29	0.0163438	1.12	0.0000000	0.00	0.303999	0.15	0.0002428	1.29	0.484346	8.73	26.7135	0.15	0.0117558	1.29	188.8622	0.16	25.84049	1.12	0.0000000	0.00	0.0269806	0.15
15D01866	2.9 %	✓ 0.0616576	1.54	0.0000000	0.00	0.0034842	1.68	0.0000559	10.35	13.1979	1.68	0.0115238	1.54	0.0000000	0.00	0.228955	0.20	0.0001835	1.68	0.409177	10.39	20.1191	0.20	0.0088822	1.68	141.2822	0.21	18.21983	1.54	0.0000000	0.00	0.0203203	0.20
15D01868	3.0 %	✓ 0.0640833	1.44	0.0000000	0.00	0.0042375	1.49	0.0000554	9.77	16.0510	1.49	0.0119772	1.44	0.0000000	0.00	0.242621	0.19	0.0002231	1.49	0.406047	9.82	21.3199	0.19	0.0108023	1.49	150.1111	0.19	18.93661	1.44	0.0000000	0.00	0.0215331	0.19
15D01869	3.2 %	✓ 0.0773281	1.18	0.0000000	0.00	0.0062779	1.00	0.0000659	8.64	23.7799	1.00	0.0144526	1.18	0.0000000	0.00	0.313754	0.15	0.0003305	1.00	0.482897	8.68	27.5707	0.15	0.0160039	1.00	194.3699	0.15	22.85046	1.18	0.0000000	0.00	0.0278464	0.15
15D01870	3.4 %	✓ 0.0749275	1.31	0.0000000	0.00	0.0072598	0.87	0.0000521	10.96	27.4993	0.87	0.0140039	1.31	0.0000000	0.00	0.327398	0.14	0.0003822	0.87	0.381729	11.00	28.7696	0.14	0.0185070	0.87	202.6965	0.15	22.14107	1.31	0.0000000	0.00	0.0290573	0.14
15D01872	3.6 %	✓ 0.0789727	1.24	0.0000000	0.00	0.0090844	0.72	0.0000605	9.53	34.4106	0.72	0.0147600	1.24	0.0000000	0.00	0.357592	0.14	0.0004783	0.72	0.442750	9.58	31.4229	0.14	0.0231583	0.72	220.6457	0.14	23.33644	1.24	0.0000000	0.00	0.0317371	0.14
15D01873	3.8 %	✓ 0.0508509	1.69	0.0000000	0.00	0.0059151	1.06	0.0000432	13.54	22.4057	1.06	0.0095040	1.69	0.0000000	0.00	0.237524	0.19	0.0003114	1.06	0.316497	13.57	20.8721	0.19	0.0150791	1.06	146.5738	0.19	15.02644	1.69	0.0000000	0.00	0.0210808	0.19
15D01874	4.0 %	✓ 0.0568277	1.62	0.0000000	0.00	0.0082285	0.82	0.0000458	12.09	31.1684	0.82	0.0106211	1.62	0.0000000	0.00	0.285832	0.16	0.0004332	0.82	0.334861	12.12	25.1170	0.16	0.0209763	0.82	175.5702	0.17	16.79257	1.62	0.0000000	0.00	0.0253682	0.16
15D01876	4.3 %	0.0739505	1.40	0.0000000	0.00	0.0142061	0.53	0.0000547	9.82	53.8111	0.53	0.0138213	1.40	0.0000000	0.00	0.408097	0.12	0.0007480	0.53	0.400082	9.86	35.8609	0.12	0.0362148	0.53	248.7340	0.13	21.85237	1.40	0.0000000	0.00	0.0362195	0.12
15D01877	4.6 %	0.0519500	1.70	0.0000000	0.00	0.0099931	0.68	0.0000476	11.71	37.8527	0.68	0.0097095	1.70	0.0000000	0.00	0.285932	0.16	0.0005262	0.68	0.348547	11.74	25.1258	0.16	0.0254749	0.68	174.5140	0.16	15.35122	1.70	0.0000000	0.00	0.0253771	0.16
15D01878	4.9 %	0.0749850	1.28	0.0000000	0.00	0.0214976	0.43	0.0000567	10.08	81.4303	0.43	0.0140147	1.28	0.0000000	0.00	0.488052	0.11	0.0011319	0.43	0.415041	10.13	42.8868	0.11	0.0548026	0.43	295.9029	0.10	22.15807	1.28	0.0000000	0.00	0.0433157	0.11
15D01880	5.2 %	0.0665489	1.51	0.0000000	0.00	0.0213513	0.43	0.0000492	11.68	80.8760	0.43	0.0124380	1.51	0.0000000	0.00	0.445160	0.12	0.0011242	0.43	0.359616	11.71	39.1178	0.12	0.0544296	0.43	267.4889	0.12	19.66521	1.51	0.0000000	0.00	0.0395089	0.12
15D01881	5.5 %	0.0482431	1.82	0.0000000	0.00	0.0166959	0.47	0.0000348	16.23	63.2422	0.47	0.0090166	1.82	0.0000000	0.00	0.330092	0.15	0.0008791	0.47	0.254760	16.25	29.0063	0.15	0.0425620	0.47	198.1519	0.14	14.25583	1.82	0.0000000	0.00	0.0292964	0.15
15D01882	5.8 %	0.0624926	1.61	0.0000000	0.00	0.0276839	0.38	0.0000461	12.12	104.8632	0.38	0.0116799	1.61	0.0000000	0.00	0.471211	0.11	0.0014576	0.38	0.337256	12.16	41.4070	0.11	0.0705729	0.38	279.9479	0.11	18.46656	1.61	0.0000000	0.00	0.0418210	0.11
15D01884	6.1 %	0.0585240	1.70	0.0000000	0.00	0.0299521	0.38	0.0000447	12.26	113.4551	0.38	0.0109381	1.70	0.0000000	0.00	0.460794	0.12	0.0015770	0.38	0.326480	12.30	40.4916	0.12	0.0763553	0.38	270.5591	0.12	17.29384	1.70	0.0000000	0.00	0.0408965	0.12
15D01885	6.5 %	0.0468189	1.94	0.0000000	0.00	0.0261816	0.40	0.0000348	16.10	99.1728	0.40	0.0087505	1.94	0.0000000	0.00	0.379499	0.13	0.0013785	0.40	0.254088	16.13	33.3479	0.13	0.0667433	0.40	220.0776	0.13	13.83499	1.94	0.0000000	0.00	0.0336814	0.13
15D01886	7.0 %	0.0470120	1.92	0.0000000	0.00	0.0315732	0.38	0.0000320	18.51	119.5953	0.38	0.0087865	1.92	0.0000000	0.00	0.410771	0.12	0.0016624	0.38	0.234197	18.53	36.0958	0.12	0.0804877	0.38	237.2200	0.12	13.89204	1.92	0.0000000	0.00	0.0364568	0.12
15D01888	7.6 %	0.0523912	1.99	0.0000000	0.00	0.0415052	0.35	0.0000379	14.58	157.2168	0.35	0.0097919	1.99	0.0000000	0.00	0.486899	0.11	0.0021853	0.35	0.276994	14.61	42.7855	0.11	0.1058069	0.35	278.4527	0.12	15.48159	1.99	0.0000000	0.00	0.0432134	0.11
15D01889	8.4 %	0.0605513	1.86	0.0000000	0.00	0.0546291	0.34	0.0000386	14.74	206.9285	0.34	0.0113170	1.86	0.0000000	0.00	0.577888	0.10	0.0028763	0.34	0.282001	14.77	50.7810	0.10	0.1392629	0.34	325.1432	0.11	17.89292	1.86	0.0000000	0.00	0.0512889	0.10
15D01890	9.4 %	0.0639581	1.90	0.0000000	0.00	0.0682875	0.33	0.0000516	10.98	258.6648	0.33	0.0119538	1.90	0.0000000	0.00	0.639742	0.10	0.0035954	0.33	0.377272	11.01	56.2163	0.10	0.1740814	0.33	357.7510	0.10	18.89962	1.90	0.0000000	0.00	0.0567785	0.10
15D01892	10.5 %	0.0645097	1.81	0.0000000	0.00	0.0759848	0.33	0.0000559	10.65	287.8211	0.33	0.0120569	1.81	0.0000000	0.00	0.634737	0.10	0.0040007	0.33	0.408310	10.69	55.7765	0.10	0.1937036	0.33	347.7203	0.10	19.06261	1.81	0.0000000	0.00	0.0563343	0.10
15D01893	11.7 %	0.0583588	1.86	0.0000000																													



Additional Parameters			40Ar/39Ar	1σ	37Ar/39Ar	1σ	36Ar/39Ar	1σ	Time (days)	37Ar (decay)	39Ar (decay)	40Ar (moles)
15D01853	1.9 %		9.707740	0.010715	0.263285	0.004680	0.008443	0.000044	83.951	5.262866	1.00059342	2.212E-11
15D01854	2.0 %	✓	9.058096	0.010387	0.298994	0.005020	0.006545	0.000040	83.960	5.263733	1.00059348	1.939E-11
15D01856	2.1 %	✓	8.705108	0.011140	0.327530	0.006107	0.005422	0.000038	83.977	5.265538	1.00059360	1.550E-11
15D01857	2.2 %	✓	8.543684	0.015459	0.321279	0.009890	0.004946	0.000046	83.986	5.266477	1.00059366	9.645E-12
15D01858	2.3 %	✓	8.455884	0.013309	0.393182	0.008575	0.004601	0.000043	83.994	5.267344	1.00059372	1.102E-11
15D01860	2.4 %	✓	8.353195	0.012119	0.443183	0.007228	0.004232	0.000034	84.012	5.269151	1.00059385	1.290E-11
15D01861	2.5 %	✓	8.201341	0.013200	0.495305	0.008124	0.003941	0.000040	84.021	5.270090	1.00059391	1.096E-11
15D01862	2.6 %	✓	8.162572	0.013641	0.536676	0.008470	0.003726	0.000037	84.029	5.270958	1.00059397	1.086E-11
15D01864	2.7 %	✓	8.107920	0.016437	0.539280	0.010699	0.003546	0.000048	84.047	5.272766	1.00059409	8.138E-12
15D01865	2.8 %	✓	8.034720	0.012817	0.653608	0.008495	0.003447	0.000037	84.055	5.273634	1.00059415	1.031E-11
15D01866	2.9 %	✓	7.925406	0.016704	0.655697	0.011084	0.003239	0.000048	84.064	5.274574	1.00059421	7.657E-12
15D01868	3.0 %	✓	7.926088	0.015670	0.752484	0.011285	0.003206	0.000044	84.081	5.276383	1.00059434	8.115E-12
15D01869	3.2 %	✓	7.875115	0.012229	0.862008	0.008697	0.003033	0.000033	84.090	5.277252	1.00059439	1.043E-11
15D01870	3.4 %	✓	7.811101	0.011865	0.955233	0.008402	0.002857	0.000034	84.099	5.278193	1.00059446	1.079E-11
15D01872	3.6 %	✓	7.759767	0.011105	1.094275	0.008027	0.002802	0.000031	84.116	5.280003	1.00059458	1.171E-11
15D01873	3.8 %	✓	7.737828	0.015789	1.072703	0.011520	0.002720	0.000041	84.124	5.280872	1.00059464	7.758E-12
15D01874	4.0 %	✓	7.653271	0.012893	1.239890	0.010344	0.002590	0.000037	84.133	5.281814	1.00059470	9.235E-12
15D01876	4.3 %		7.538845	0.009826	1.499037	0.008123	0.002457	0.000029	84.150	5.283553	1.00059482	1.299E-11
15D01877	4.6 %		7.549938	0.012708	1.505000	0.010582	0.002465	0.000035	84.159	5.284495	1.00059488	9.115E-12
15D01878	4.9 %		7.407830	0.008852	1.896302	0.008354	0.002248	0.000022	84.167	5.285365	1.00059494	1.527E-11
15D01880	5.2 %		7.331570	0.008963	2.064629	0.009116	0.002245	0.000026	84.185	5.287178	1.00059507	1.379E-11
15D01881	5.5 %		7.313094	0.011353	2.177097	0.010815	0.002237	0.000030	84.194	5.288121	1.00059513	1.020E-11
15D01882	5.8 %		7.195613	0.008521	2.528193	0.010073	0.002175	0.000024	84.202	5.288991	1.00059519	1.433E-11
15D01884	6.1 %		7.096585	0.008813	2.796668	0.011121	0.002182	0.000025	84.219	5.290805	1.00059531	1.382E-11
15D01885	6.5 %		7.001305	0.009758	2.967944	0.012462	0.002186	0.000027	84.228	5.291749	1.00059538	1.123E-11
15D01886	7.0 %		6.942346	0.009080	3.305902	0.013225	0.002173	0.000025	84.237	5.292620	1.00059543	1.206E-11
15D01888	7.6 %		6.854007	0.008192	3.665469	0.013623	0.002190	0.000024	84.254	5.294435	1.00059556	1.411E-11
15D01889	8.4 %		6.737733	0.007152	4.063772	0.014397	0.002263	0.000022	84.263	5.295307	1.00059562	1.647E-11
15D01890	9.4 %		6.680346	0.006925	4.587036	0.016008	0.002346	0.000021	84.272	5.296251	1.00059568	1.808E-11
15D01892	10.5 %		6.554188	0.006656	5.142399	0.017796	0.002511	0.000020	84.289	5.298067	1.00059580	1.761E-11
15D01893	11.7 %		6.508880	0.007477	5.784833	0.020214	0.002740	0.000022	84.297	5.298940	1.00059586	1.505E-11
15D01894	13.1 %		6.357790	0.007557	6.335649	0.022188	0.002873	0.000026	84.306	5.299885	1.00059592	1.310E-11
15D01896	14.7 %		6.211304	0.008219	6.848465	0.024455	0.003129	0.000029	84.324	5.301702	1.00059605	1.073E-11
15D01897	16.5 %		6.035533	0.009878	7.413472	0.027761	0.003570	0.000038	84.332	5.302575	1.00059611	7.845E-12
15D01898	18.3 %		5.876824	0.013149	8.670336	0.034973	0.004370	0.000049	84.341	5.303521	1.00059617	5.385E-12
15D01900	20.2 %		5.682891	0.017444	12.479724	0.055728	0.006237	0.000071	84.371	5.306650	1.00059638	3.675E-12
15D01901	22.2 %		6.017587	0.027505	22.295106	0.119875	0.010546	0.000119	84.380	5.307596	1.00059644	2.533E-12
15D01903	24.5 %		7.001865	0.052107	42.222603	0.326083	0.018965	0.000234	84.398	5.309489	1.00059657	1.795E-12



Procedure Blanks		36Ar [fA]	1σ	37Ar [fA]	1σ	38Ar [fA]	1σ	39Ar [fA]	1σ	40Ar [fA]	1σ
15D01853	1.9 %	0.0137696	0.0004587	0.0354421	0.0299253	0.0590368	0.0308425	0.0217349	0.0248880	3.8481158	0.0964149
15D01854	2.0 %	0.0132713	0.0004587	0.0213024	0.0299253	0.0613817	0.0308425	0.0207215	0.0248880	3.7245041	0.0964149
15D01856	2.1 %	0.0124107	0.0004587	0.0010699	0.0299253	0.0659770	0.0308425	0.0183345	0.0248880	3.5051314	0.0964149
15D01857	2.2 %	0.0120480	0.0004587	0.0093650	0.0299253	0.0682117	0.0308425	0.0169877	0.0248880	3.4094438	0.0964149
15D01858	2.3 %	0.0117590	0.0004587	0.0152519	0.0299253	0.0701805	0.0308425	0.0157039	0.0248880	3.3311300	0.0964149
15D01860	2.4 %	0.0112815	0.0004587	0.0228021	0.0299253	0.0739922	0.0308425	0.0129703	0.0248880	3.1955041	0.0964149
15D01861	2.5 %	0.0110913	0.0004587	0.0245857	0.0299253	0.0758194	0.0308425	0.0115493	0.0248880	3.1379851	0.0964149
15D01862	2.6 %	0.0109463	0.0004587	0.0251455	0.0299253	0.0774121	0.0308425	0.0102557	0.0248880	3.0918155	0.0964149
15D01864	2.7 %	0.0107243	0.0004587	0.0235731	0.0299253	0.0804402	0.0308425	0.0076646	0.0248880	3.0141844	0.0964149
15D01865	2.8 %	0.0106502	0.0004587	0.0217724	0.0299253	0.0817546	0.0308425	0.0064906	0.0248880	2.9845931	0.0964149
15D01866	2.9 %	0.0105894	0.0004587	0.0192422	0.0299253	0.0830766	0.0308425	0.0052829	0.0248880	2.9572890	0.0964149
15D01868	3.0 %	0.0105180	0.0004587	0.0131764	0.0299253	0.0853212	0.0308425	0.0031787	0.0248880	2.9163656	0.0964149
15D01869	3.2 %	0.0105002	0.0004587	0.0099149	0.0299253	0.0862594	0.0308425	0.0022826	0.0248880	2.9011394	0.0964149
15D01870	3.4 %	0.0104896	0.0004587	0.0062655	0.0299253	0.0871740	0.0308425	0.0014019	0.0248880	2.8872084	0.0964149
15D01872	3.6 %	0.0104866	0.0004587	0.0007346	0.0299253	0.0886350	0.0308425	0.0000156	0.0248880	2.8661699	0.0964149
15D01873	3.8 %	0.0104896	0.0004587	0.0039384	0.0299253	0.0891971	0.0308425	0.0005638	0.0248880	2.8580266	0.0964149
15D01874	4.0 %	0.0104939	0.0004587	0.0072015	0.0299253	0.0897042	0.0308425	0.0010603	0.0248880	2.8501604	0.0964149
15D01876	4.3 %	0.0104994	0.0004587	0.0124534	0.0299253	0.0903621	0.0308425	0.0017161	0.0248880	2.8371677	0.0964149
15D01877	4.6 %	0.0104988	0.0004587	0.0147883	0.0299253	0.0905676	0.0308425	0.0019358	0.0248880	2.8304493	0.0964149
15D01878	4.9 %	0.0104947	0.0004587	0.0165825	0.0299253	0.0906634	0.0308425	0.0020592	0.0248880	2.8241900	0.0964149
15D01880	5.2 %	0.0104727	0.0004587	0.0191206	0.0299253	0.0905729	0.0308425	0.0020948	0.0248880	2.8103670	0.0964149
15D01881	5.5 %	0.0104532	0.0004587	0.0197755	0.0299253	0.0903711	0.0308425	0.0020104	0.0248880	2.8025308	0.0964149
15D01882	5.8 %	0.0104299	0.0004587	0.0199750	0.0299253	0.0900907	0.0308425	0.0018809	0.0248880	2.7948191	0.0964149
15D01884	6.1 %	0.0103654	0.0004587	0.0191871	0.0299253	0.0892167	0.0308425	0.0014935	0.0248880	2.7772249	0.0964149
15D01885	6.5 %	0.0103238	0.0004587	0.0181811	0.0299253	0.0886074	0.0308425	0.0012540	0.0248880	2.7673234	0.0964149
15D01886	7.0 %	0.0102811	0.0004587	0.0169319	0.0299253	0.0879509	0.0308425	0.0010267	0.0248880	2.7578207	0.0964149
15D01888	7.6 %	0.0101818	0.0004587	0.0135180	0.0299253	0.0862933	0.0308425	0.0005928	0.0248880	2.7374013	0.0964149
15D01889	8.4 %	0.0101309	0.0004587	0.0115926	0.0299253	0.0853585	0.0308425	0.0004337	0.0248880	2.7276153	0.0964149
15D01890	9.4 %	0.0100751	0.0004587	0.0093879	0.0299253	0.0842440	0.0308425	0.0003221	0.0248880	2.7173193	0.0964149
15D01892	10.5 %	0.0099715	0.0004587	0.0051181	0.0299253	0.0818028	0.0308425	0.0003630	0.0248880	2.6994854	0.0964149
15D01893	11.7 %	0.0099267	0.0004587	0.0032223	0.0299253	0.0804919	0.0308425	0.0005415	0.0248880	2.6924272	0.0964149
15D01894	13.1 %	0.0098843	0.0004587	0.0014185	0.0299253	0.0789699	0.0308425	0.0008821	0.0248880	2.6863684	0.0964149
15D01896	14.7 %	0.0098296	0.0004587	0.0008671	0.0299253	0.0757452	0.0308425	0.0020640	0.0248880	2.6809951	0.0964149
15D01897	16.5 %	0.0098203	0.0004587	0.0011799	0.0299253	0.0740582	0.0308425	0.0029256	0.0248880	2.6821979	0.0964149
15D01898	18.3 %	0.0098263	0.0004587	0.0007610	0.0299253	0.0721287	0.0308425	0.0041114	0.0248880	2.6869506	0.0964149
15D01900	20.2 %	0.0100056	0.0004587	0.0083093	0.0299253	0.0649919	0.0308425	0.0103076	0.0248880	2.7360028	0.0964149
15D01901	22.2 %	0.0101218	0.0004587	0.0140677	0.0299253	0.0626061	0.0308425	0.0129998	0.0248880	2.7635360	0.0964149
15D01903	24.5 %	0.0104655	0.0004587	0.0310454	0.0299253	0.0575167	0.0308425	0.0197578	0.0248880	2.8411146	0.0964149



OSU Argon Geochronology Lab																									
Intercept Values	36Ar					37Ar					38Ar					39Ar					40Ar				
		[fA]	1σ	r2			[fA]	1σ	r2			[fA]	1σ	r2			[fA]	1σ	r2			[fA]	1σ	r2	
15D01853	1.9 %	0.3907196	0.0014799	0.3458	EXP 150 of 150		2.3642	0.0275	0.1495	EXP 150 of 150		1.510694	0.026845	0.1569	EXP 150 of 150		47.1105	0.0294	0.9908	EXP 150 of 150		465.8994	0.0538	0.9988	EXP 150 of 150
15D01854	2.0 %	0.2877751	0.0013567	0.2096	EXP 150 of 150		2.5052	0.0278	0.1678	EXP 150 of 150		1.326818	0.026089	0.0536	EXP 150 of 150		44.2538	0.0291	0.9898	EXP 150 of 150		408.7152	0.0529	0.9984	EXP 150 of 150
15D01856	2.1 %	0.2016536	0.0010668	0.0002	EXP 150 of 150		2.2626	0.0287	0.1905	EXP 150 of 150		1.078348	0.026019	0.0424	EXP 150 of 150		36.8286	0.0280	0.9865	EXP 150 of 150		327.4189	0.0488	0.9977	EXP 150 of 150
15D01857	2.2 %	0.1214518	0.0008367	0.0798	EXP 150 of 150		1.3977	0.0309	0.0427	EXP 150 of 150		0.656903	0.024301	0.0306	EXP 149 of 150		23.3359	0.0274	0.9683	EXP 150 of 150		204.8934	0.0379	0.9932	EXP 150 of 150
15D01858	2.3 %	0.1292315	0.0009022	0.0650	EXP 150 of 150		1.9717	0.0305	0.2126	EXP 149 of 150		0.849385	0.027320	0.0918	EXP 150 of 150		26.9356	0.0260	0.9782	EXP 150 of 150		233.4711	0.0379	0.9959	EXP 150 of 150
15D01860	2.4 %	0.1393038	0.0008338	0.0282	EXP 150 of 150		2.6304	0.0299	0.0822	EXP 149 of 150		0.916929	0.025055	0.0434	EXP 150 of 150		31.9263	0.0294	0.9801	EXP 150 of 150		272.6163	0.0466	0.9966	EXP 150 of 150
15D01861	2.5 %	0.1143146	0.0008695	0.0537	EXP 150 of 150		2.5422	0.0282	0.2521	EXP 149 of 150		0.759506	0.026884	0.0163	EXP 150 of 150		27.6410	0.0286	0.9749	EXP 150 of 150		232.1582	0.0439	0.9948	EXP 150 of 150
15D01862	2.6 %	0.1080478	0.0007871	0.1061	EXP 150 of 150		2.7416	0.0302	0.1879	EXP 150 of 150		0.754391	0.029095	0.0215	EXP 150 of 150		27.5026	0.0310	0.9705	EXP 150 of 150		229.8780	0.0394	0.9957	EXP 150 of 150
15D01864	2.7 %	0.0804666	0.0007897	0.2490	EXP 150 of 150		2.0738	0.0278	0.1253	EXP 150 of 150		0.524589	0.024894	0.0030	EXP 150 of 150		20.7559	0.0278	0.9571	EXP 150 of 150		173.0206	0.0429	0.9856	EXP 150 of 150
15D01865	2.8 %	0.0973031	0.0007571	0.1602	EXP 150 of 150		3.2267	0.0275	0.3084	EXP 150 of 150		0.712825	0.027404	0.0415	EXP 149 of 150		26.5314	0.0256	0.9785	EXP 150 of 150		218.3082	0.0430	0.9942	EXP 150 of 150
15D01866	2.9 %	0.0719149	0.0007450	0.2972	EXP 150 of 150		2.4347	0.0272	0.3155	EXP 149 of 150		0.558406	0.027943	0.0706	EXP 150 of 150		19.9816	0.0282	0.9539	EXP 150 of 150		162.9209	0.0357	0.9865	EXP 150 of 150
15D01868	3.0 %	0.0748332	0.0007088	0.2439	EXP 150 of 150		2.9703	0.0314	0.3315	EXP 149 of 150		0.567048	0.023847	0.0532	EXP 150 of 150		21.1780	0.0272	0.9607	EXP 150 of 150		172.4532	0.0412	0.9879	EXP 150 of 150
15D01869	3.2 %	0.0892028	0.0006824	0.2545	EXP 150 of 150		4.4094	0.0292	0.4069	EXP 150 of 150		0.714740	0.026880	0.0768	EXP 150 of 150		27.3910	0.0253	0.9804	EXP 150 of 150		220.7503	0.0447	0.9943	EXP 150 of 150
15D01870	3.4 %	0.0878448	0.0007688	0.2926	EXP 150 of 150		5.1034	0.0283	0.4732	EXP 150 of 150		0.627034	0.027211	0.0003	EXP 150 of 150		28.5849	0.0263	0.9803	EXP 150 of 150		228.3758	0.0386	0.9962	EXP 150 of 150
15D01872	3.6 %	0.0933708	0.0007598	0.1427	EXP 150 of 150		6.3923	0.0284	0.6418	EXP 150 of 150		0.716457	0.027700	0.0180	EXP 150 of 150		31.2256	0.0268	0.9832	EXP 150 of 150		247.5550	0.0422	0.9966	EXP 150 of 150
15D01873	3.8 %	0.0639249	0.0006430	0.3234	EXP 150 of 150		4.1650	0.0293	0.3478	EXP 150 of 150		0.467389	0.028808	0.0121	EXP 150 of 150		20.7413	0.0280	0.9576	EXP 150 of 150		164.9264	0.0389	0.9856	EXP 150 of 150
15D01874	4.0 %	0.0717293	0.0007089	0.2768	EXP 150 of 150		5.7946	0.0318	0.5275	EXP 150 of 150		0.533919	0.025209	0.0052	EXP 150 of 150		24.9629	0.0257	0.9754	EXP 150 of 150		195.7704	0.0409	0.9925	EXP 150 of 150
15D01876	4.3 %	0.0934717	0.0008198	0.1469	EXP 150 of 150		10.0009	0.0293	0.7577	EXP 150 of 150		0.721805	0.023190	0.0097	EXP 149 of 150		35.6472	0.0269	0.9869	EXP 150 of 150		274.2083	0.0422	0.9976	EXP 149 of 150
15D01877	4.6 %	0.0688078	0.0006681	0.3022	EXP 150 of 150		7.0398	0.0302	0.6545	EXP 150 of 150		0.545855	0.025693	0.0695	EXP 150 of 150		24.9769	0.0256	0.9746	EXP 150 of 150		193.2463	0.0364	0.9938	EXP 150 of 150
15D01878	4.9 %	0.1013004	0.0007265	0.2973	EXP 150 of 150		15.1265	0.0300	0.8907	EXP 150 of 150		0.815767	0.027197	0.0120	EXP 149 of 150		42.6427	0.0295	0.9890	EXP 150 of 150		321.8083	0.0499	0.9978	EXP 150 of 150
15D01880	5.2 %	0.0931987	0.0007842	0.1510	EXP 150 of 150		15.0211	0.0297	0.8894	EXP 150 of 150		0.717241	0.027477	0.0114	EXP 150 of 150		38.8997	0.0263	0.9894	EXP 150 of 150		290.7983	0.0422	0.9980	EXP 150 of 150
15D01881	5.5 %	0.0715682	0.0006561	0.3822	EXP 148 of 150		11.7487	0.0282	0.8485	EXP 150 of 150		0.496728	0.026603	0.0005	EXP 150 of 150		28.8472	0.0278	0.9782	EXP 150 of 150		215.8271	0.0422	0.9945	EXP 150 of 150
15D01882	5.8 %	0.0952941	0.0007811	0.2458	EXP 150 of 150		19.4647	0.0275	0.9365	EXP 150 of 150		0.720948	0.025811	0.0091	EXP 150 of 150		41.1887	0.0266	0.9903	EXP 150 of 150		302.0766	0.0454	0.9978	EXP 150 of 150
15D01884	6.1 %	0.0936288	0.0007716	0.1874	EXP 150 of 150		21.0499	0.0309	0.9356	EXP 150 of 150		0.700288	0.024503	0.0262	EXP 150 of 150		40.2851	0.0292	0.9876	EXP 150 of 150		291.4674	0.0490	0.9972	EXP 150 of 150
15D01885	6.5 %	0.0790214	0.0006824	0.2270	EXP 150 of 150		18.3982	0.0319	0.9156	EXP 150 of 150		0.546830	0.025959	0.0132	EXP 150 of 150		33.1817	0.0274	0.9844	EXP 150 of 150		237.3606	0.0438	0.9956	EXP 150 of 150
15D01886	7.0 %	0.0842291	0.0006728	0.3096	EXP 150 of 150		22.1782	0.0345	0.9338	EXP 149 of 150		0.559037	0.029573	0.0043	EXP 150 of 150		35.9237	0.0268	0.9872	EXP 150 of 150		254.6010	0.0460	0.9961	EXP 150 of 150
15D01888	7.6 %	0.0985372	0.0008142	0.2213	EXP 150 of 150		29.1362	0.0324	0.9632	EXP 150 of 150		0.679599	0.025115	0.0238	EXP 150 of 150		42.5912	0.0286	0.9894	EXP 150 of 150		297.5280	0.0552	0.9966	EXP 150 of 150
15D01889	8.4 %	0.1185070	0.0008804	0.1671	EXP 150 of 150		38.3365	0.0316	0.9798	EXP 150 of 150		0.777483	0.026902	0.0009	EXP 150 of 150		50.5638	0.0272	0.9931	EXP 150 of 150		346.7640	0.0535	0.9979	EXP 150 of 150
15D01890	9.4 %	0.1345151	0.0009566	0.1702	EXP 150 of 150		47.9077	0.0358	0.9824	EXP 150 of 150		0.935040	0.026554	0.0739	EXP 150 of 150		55.9954	0.0307	0.9930	EXP 150 of 150		380.4667	0.0508	0.9985	EXP 150 of 150
15D01892	10.5 %	0.1421744	0.0008841	0.1218	EXP 150 of 150		53.2842	0.0369	0.9857	EXP 150 of 150		0.963681	0.029561	0.0818	EXP 150 of 150		55.5782	0.0277	0.9943	EXP 150 of 150		370.5534	0.0531	0.9982	EXP 150 of 150
15D01893	11.7 %	0.1340395	0.0008006	0.0746	EXP 150 of 150		51.5644	0.0339	0.9871	EXP 150 of 150		0.788470	0.026055	0.0239	EXP 150 of 150		47.8210	0.0316	0.9897	EXP 150 of 150		317.0147	0.0493	0.9975	EXP 150 of 150
15D01894	13.1 %	0.1259242	0.0008556	0.1284	EXP 149 of 150		50.3386	0.0320	0.9876	EXP 150 of 150		0.713722	0.029600	0.0257	EXP 150 of 150		42.6350	0.0280	0.9903	EXP 150 of 150		276.4141	0.0429	0.9970	EXP 150 of 150
15D01896	14.7 %	0.1157580	0.0008029	0.1533	EXP 150 of 150		45.5957	0.0336	0.9836	EXP 149 of 150		0.643471	0.030139	0.0188	EXP 150 of 150		35.7415	0.0266	0.9868	EXP 149 of 150		226.8550	0.0405	0.9947	EXP 150 of 150
15D01897	16.5 %	0.1007573	0.0007914	0.2066	EXP 150 of 150		37.1301	0.0343	0.9736	EXP 150 of 150		0.459007	0.029034	0.0029	EXP 150 of 150		26.8934	0.0259	0.9778	EXP 150 of 150		166.5785	0.0392	0.9754	EXP 150 of 150
15D01898	18.3 %	0.0883060	0.0006951	0.2838	EXP 150 of 150		30.6088	0.0294	0.9720	EXP 150 of 150		0.299417	0.029143	0.0000	EXP 150 of 150		18.9615	0.0263	0.9550	EXP 150 of 150		115.1932	0.0403		







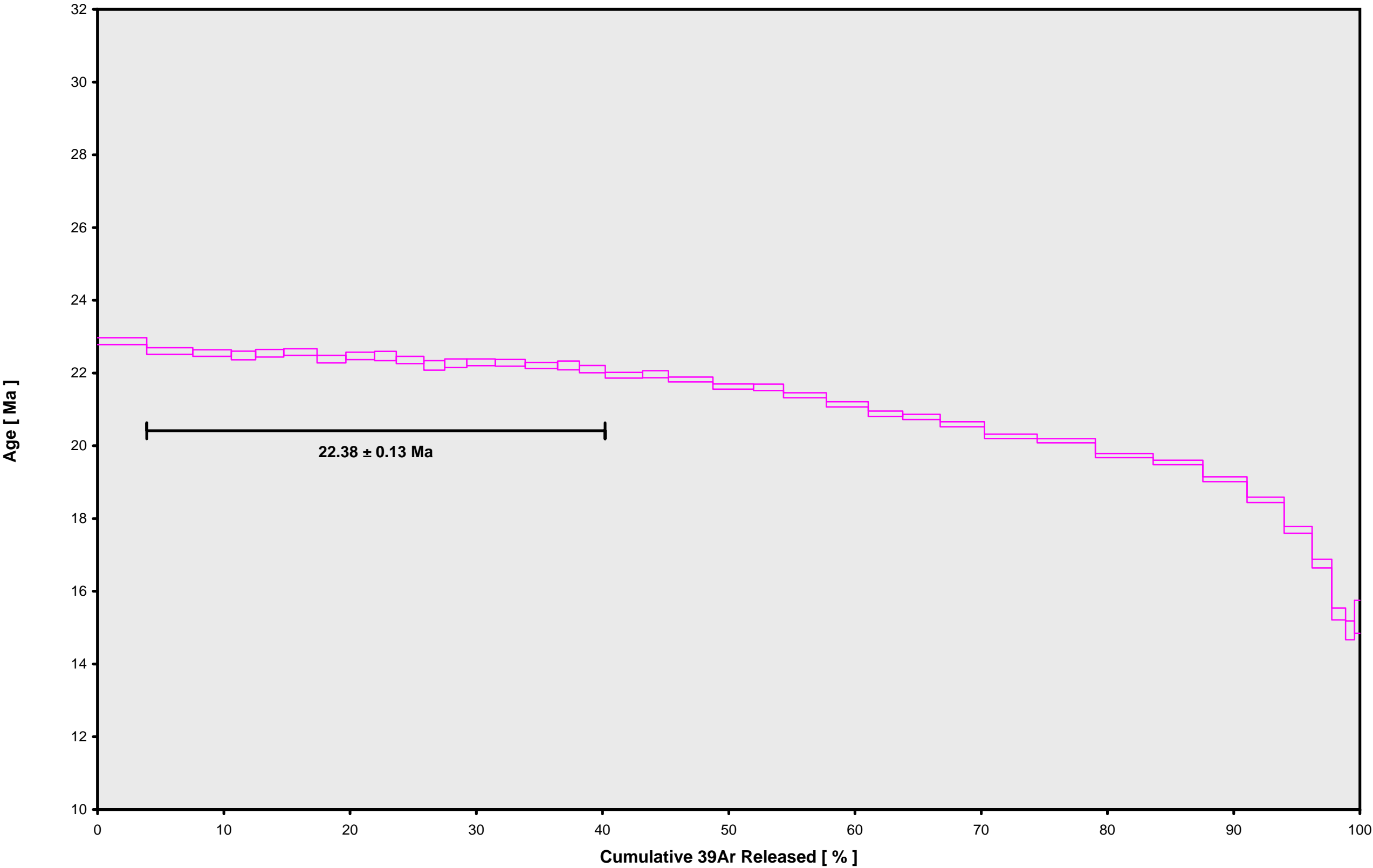
[illegible]



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
15D01853	1.9 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0	0.43	0	0	0	0	0	0	0	0	0	0	0	0	0
15D01854	2.0 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0	0.43	0	0	0	0	0	0	0	0	0	0	0	0	0
15D01856	2.1 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0	0.43	0	0	0	0	0	0	0	0	0	0	0	0	0
15D01857	2.2 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0	0.43	0	0	0	0	0	0	0	0	0	0	0	0	0
15D01858	2.3 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0	0.43	0	0	0	0	0	0	0	0	0	0	0	0	0
15D01860	2.4 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0	0.43	0	0	0	0	0	0	0	0	0	0	0	0	0
15D01861	2.5 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0	0.43	0	0	0	0	0	0	0	0	0	0	0	0	0
15D01862	2.6 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0	0.43	0	0	0	0	0	0	0	0	0	0	0	0	0
15D01864	2.7 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0	0.43	0	0	0	0	0	0	0	0	0	0	0	0	0
15D01865	2.8 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0	0.43	0	0	0	0	0	0	0	0	0	0	0	0	0
15D01866	2.9 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0	0.43	0	0	0	0	0	0	0	0	0	0	0	0	0
15D01868	3.0 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0	0.43	0	0	0	0	0	0	0	0	0	0	0	0	0
15D01869	3.2 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0	0.43	0	0	0	0	0	0	0	0	0	0	0	0	0
15D01870	3.4 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0	0.43	0	0	0	0	0	0	0	0	0	0	0	0	0
15D01872	3.6 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0	0.43	0	0	0	0	0	0	0	0	0	0	0	0	0
15D01873	3.8 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0	0.43	0	0	0	0	0	0	0	0	0	0	0	0	0
15D01874	4.0 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0	0.43	0	0	0	0	0	0	0	0	0	0	0	0	0
15D01876	4.3 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0	0.43	0	0	0	0	0	0	0	0	0	0	0	0	0
15D01877	4.6 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0	0.43	0	0	0	0	0	0	0	0	0	0	0	0	0
15D01878	4.9 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0	0.43	0	0	0	0	0	0	0	0	0	0	0	0	0
15D01880	5.2 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0	0.43	0	0	0	0	0	0	0	0	0	0	0	0	0
15D01881	5.5 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0	0.43	0	0	0	0	0	0	0	0	0	0	0	0	0
15D01882	5.8 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0	0.43	0	0	0	0	0	0	0	0	0	0	0	0	0
15D01884	6.1 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0	0.43	0	0	0	0	0	0	0	0	0	0	0	0	0
15D01885	6.5 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0	0.43	0	0	0	0	0	0	0	0	0	0	0	0	0
15D01886	7.0 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0	0.43	0	0	0	0	0	0	0	0	0	0	0	0	0
15D01888	7.6 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0	0.43	0	0	0	0	0	0	0	0	0	0	0	0	0
15D01889	8.4 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0	0.43	0	0	0	0	0	0	0	0	0	0	0	0	0
15D01890	9.4 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0	0.43	0	0	0	0	0	0	0	0	0	0	0	0	0
15D01892	10.5 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0	0.43	0	0	0	0	0	0	0	0	0	0	0	0	0
15D01893	11.7 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0	0.43	0	0	0	0	0	0	0	0	0	0	0	0	0
15D01894	13.1 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0	0.43	0	0	0	0	0	0	0	0	0	0	0	0	0
15D01896	14.7 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0	0.43	0	0	0	0	0	0	0	0	0	0	0	0	0
15D01897	16.5 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0	0.43	0	0	0	0	0	0	0	0	0	0	0	0	0
15D01898	18.3 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0	0.43	0	0	0	0	0	0	0	0	0	0	0	0	0
15D01900	20.2 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0	0.43	0	0	0	0	0	0	0	0	0	0	0	0	0
15D01901	22.2 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0	0.43	0	0	0	0	0	0	0	0	0	0	0	0	0
15D01903	24.5 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0	0.43	0	0	0	0	0	0	0	0	0	0	0	0	0



15D01852.AGE >>> 203-1 >>> KERGUELEN | FALLOON (14-PIL-01) PROJECT



Ar-Ages in Ma

WEIGHTED PLATEAU

22.38 ± 0.13

TOTAL FUSION

21.09 ± 0.10

NORMAL ISOCHRON

21.96 ± 0.16

INVERSE ISOCHRON

21.96 ± 0.16

MSWD (PROBABILITY)

9.76 (0%)

Sample Info

Groundmass

Kerguelen Plateau

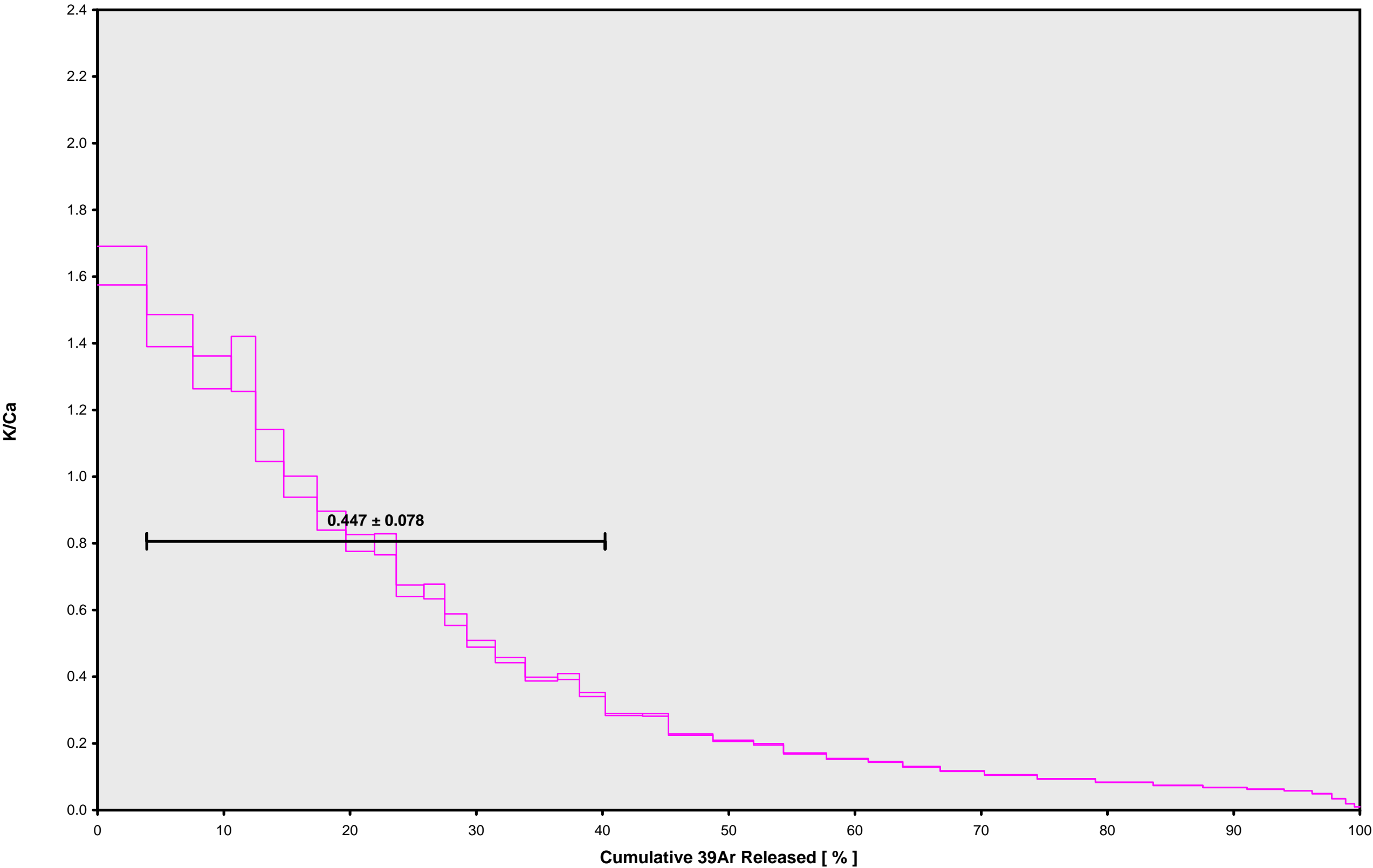
Dan Miggins

IRR = 14-OSU-06 (6C12-14)

J = 0.00175976 ± 0.00000421



15D01852.AGE >>> 203-1 >>> KERGUELEN | FALLOON (14-PIL-01) PROJECT



**Ar-Ages in Ma**

**WEIGHTED PLATEAU**

22.38 ± 0.13

**TOTAL FUSION**

21.09 ± 0.10

**NORMAL ISOCHRON**

21.96 ± 0.16

**INVERSE ISOCHRON**

21.96 ± 0.16

**Sample Info**

Groundmass

Kerguelen Plateau

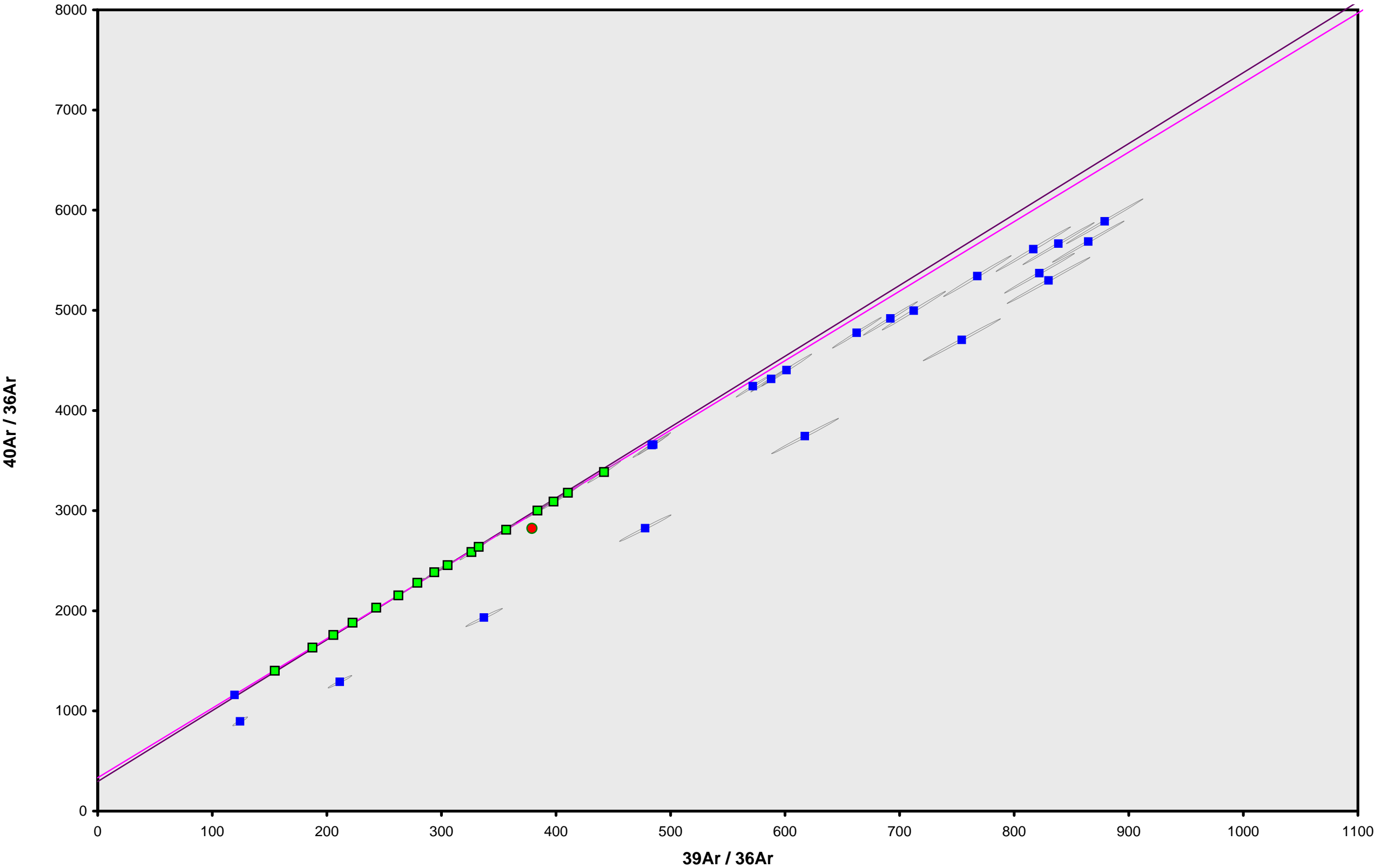
Dan Miggins

IRR = 14-OSU-06 (6C12-14)

J = 0.00175976 ± 0.00000421



15D01852.AGE >>> 203-1 >>> KERGUELEN | FALLOON (14-PIL-01) PROJECT



Ar-Ages in Ma

WEIGHTED PLATEAU

$22.38 \pm 0.13$

TOTAL FUSION

$21.09 \pm 0.10$

NORMAL ISOCHRON

$21.96 \pm 0.16$

INVERSE ISOCHRON

$21.96 \pm 0.16$

MSWD (PROBABILITY)

2.16 (1%)

40AR/36AR INTERCEPT

$332.2 \pm 10.4$

Sample Info

Groundmass

Kerguelen Plateau

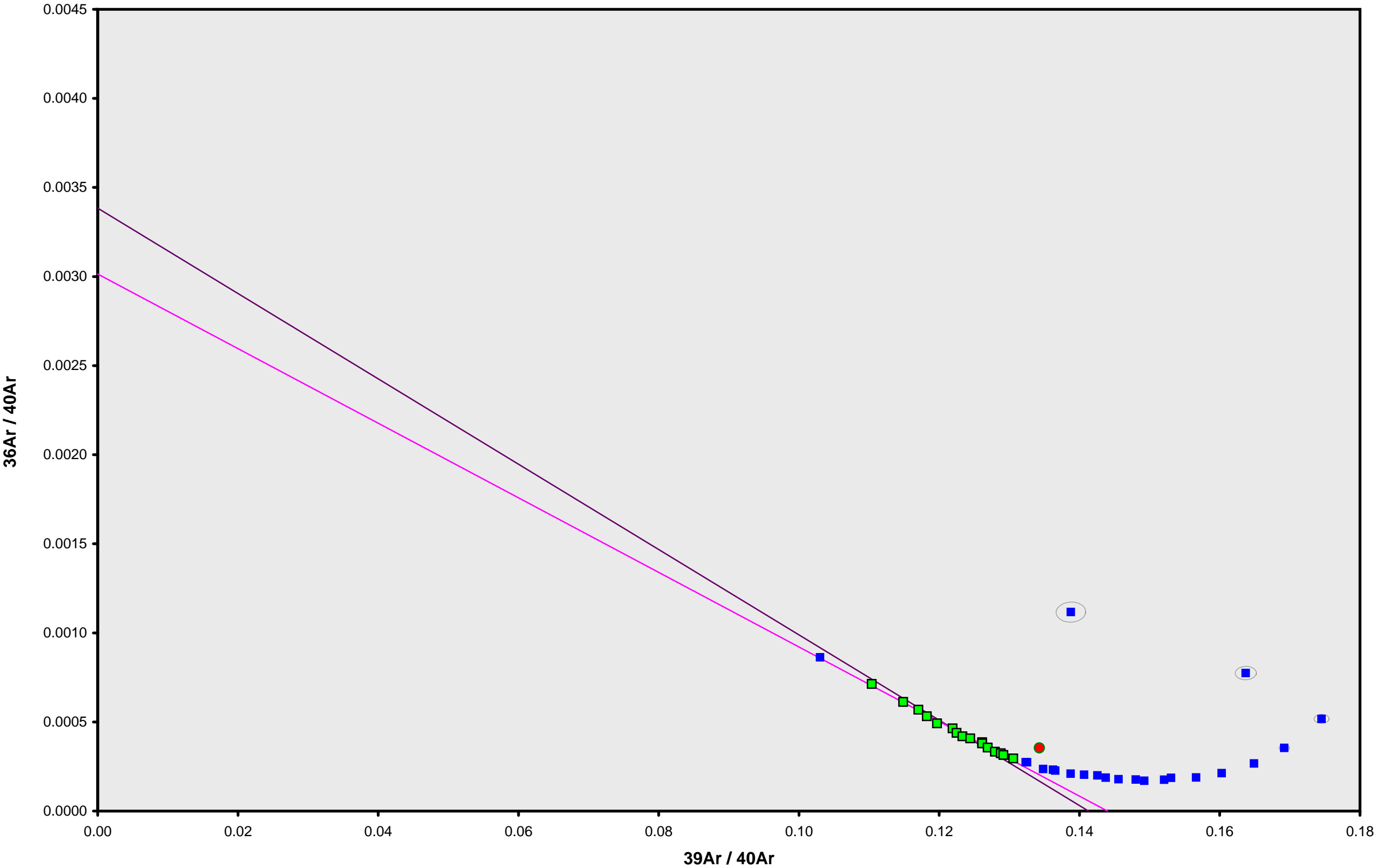
Dan Miggins

IRR = 14-OSU-06 (6C12-14)

J =  $0.00175976 \pm 0.00000421$



15D01852.AGE >>> 203-1 >>> KERGUELEN | FALLOON (14-PIL-01) PROJECT



Ar-Ages in Ma

WEIGHTED PLATEAU

22.38 ± 0.13

TOTAL FUSION

21.09 ± 0.10

NORMAL ISOCHRON

21.96 ± 0.16

INVERSE ISOCHRON

21.96 ± 0.16

MSWD (PROBABILITY)

2.17 (1%)

SPREADING FACTOR

14.0%

40AR/36AR INTERCEPT

331.7 ± 10.5

Sample Info

Groundmass

Kerguelen Plateau

Dan Miggins

IRR = 14-OSU-06 (6C12-14)

J = 0.00175976 ± 0.00000421



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
15D00233	1.9 %	✓	0.1966552	26.1815	1.799595	87.2699	533.340	19.02 ± 0.05	90.16	4.06	1.433 ± 0.024
15D00234	2.0 %	✓	0.1848087	26.6795	1.852725	90.7241	554.165	19.01 ± 0.04	91.02	4.22	1.462 ± 0.024
15D00236	2.1 %	✓	0.1840160	27.0988	1.852322	91.2445	556.151	18.97 ± 0.04	91.08	4.25	1.448 ± 0.023
15D00237	2.2 %	✓	0.1751084	25.2043	1.810166	85.8549	522.462	18.94 ± 0.05	90.97	4.00	1.465 ± 0.025
15D00238	2.3 %	✓	0.1682995	24.8142	1.775506	83.6653	508.554	18.92 ± 0.05	91.08	3.90	1.450 ± 0.025
15D00240	2.4 %	✓	0.1914996	27.8689	2.000254	94.8928	576.257	18.90 ± 0.04	91.04	4.42	1.464 ± 0.023
15D00241	2.5 %	✓	0.1669399	25.1155	1.772798	83.7748	507.997	18.87 ± 0.05	91.13	3.90	1.434 ± 0.025
15D00242	2.6 %	✓	0.1747694	26.4680	1.869955	88.4972	534.022	18.78 ± 0.04	91.17	4.12	1.438 ± 0.023
15D00244	2.7 %	✓	0.1690682	26.4063	1.849347	87.4981	526.230	18.72 ± 0.05	91.32	4.07	1.425 ± 0.024
15D00245	2.8 %	✓	0.1628180	25.3518	1.823089	83.7270	500.731	18.62 ± 0.05	91.22	3.90	1.420 ± 0.024
15D00246	2.9 %	✓	0.1595041	25.1840	1.786305	82.1417	488.617	18.52 ± 0.05	91.19	3.83	1.403 ± 0.024
15D00248	3.0 %	✓	0.1764699	28.9535	1.979503	92.3788	542.365	18.28 ± 0.04	91.21	4.30	1.372 ± 0.021
15D00249	3.2 %	✓	0.2339470	40.0723	2.823194	127.6496	731.044	17.83 ± 0.04	91.35	5.94	1.370 ± 0.016
15D00250	3.4 %	✓	0.1915651	33.3603	2.306419	104.1639	593.288	17.73 ± 0.04	91.27	4.85	1.343 ± 0.018
15D00252	3.6 %	✓	0.1961103	36.0802	2.458232	109.8512	618.047	17.52 ± 0.04	91.41	5.12	1.309 ± 0.017
15D00253	3.8 %	✓	0.1169329	21.4289	1.473143	65.6796	372.143	17.64 ± 0.05	91.49	3.06	1.318 ± 0.026
15D00254	4.0 %	✓	0.1531240	29.0487	2.008392	87.4520	481.794	17.16 ± 0.04	91.40	4.07	1.295 ± 0.019
15D00256	4.3 %	✓	0.1120989	22.4908	1.477913	66.0491	359.341	16.94 ± 0.05	91.54	3.08	1.263 ± 0.024
15D00257	4.6 %	✓	0.1317846	28.2456	1.895761	81.8838	416.056	15.83 ± 0.04	91.42	3.81	1.247 ± 0.019
15D00258	4.9 %	✓	0.1043900	23.3696	1.562276	67.5011	330.275	15.24 ± 0.05	91.44	3.14	1.242 ± 0.023
15D00260	5.2 %	✓	0.0868937	21.6147	1.401777	61.0305	275.689	14.08 ± 0.05	91.46	2.84	1.214 ± 0.024
15D00261	5.5 %	✓	0.0707448	19.7853	1.243924	55.1853	221.939	12.54 ± 0.05	91.37	2.57	1.199 ± 0.025
15D00262	5.8 %	✓	0.0529733	16.8793	1.015606	45.7320	166.951	11.39 ± 0.05	91.40	2.13	1.165 ± 0.030
15D00264	6.1 %	✓	0.0388363	14.3667	0.824680	38.6505	124.429	10.05 ± 0.06	91.53	1.80	1.157 ± 0.033
15D00265	6.5 %	✓	0.0281897	11.4308	0.597314	29.7047	85.040	8.94 ± 0.07	91.05	1.38	1.117 ± 0.040
15D00266	7.0 %	✓	0.0237820	14.1638	0.641624	36.4308	73.220	6.28 ± 0.06	91.20	1.70	1.106 ± 0.032
15D00268	7.6 %	✓	0.0141913	8.1561	0.368550	20.1279	43.609	6.77 ± 0.11	91.19	0.94	1.061 ± 0.054
15D00269	8.4 %	✓	0.0126019	12.7179	0.344006	26.4446	34.936	4.13 ± 0.08	90.31	1.23	0.894 ± 0.029
15D00270	9.4 %	✓	0.0077423	13.4945	0.221878	17.5436	21.694	3.86 ± 0.12	90.39	0.82	0.559 ± 0.018
15D00272	10.5 %	✓	0.0062852	25.4063	0.111211	14.5652	12.639	2.71 ± 0.13	87.10	0.68	0.247 ± 0.004
15D00273	11.7 %	✓	0.0067859	52.3039	0.120435	12.7307	8.134	2.00 ± 0.16	80.12	0.59	0.105 ± 0.001
15D00274	13.1 %	✓	0.0068307	68.2659	0.084528	8.3817	4.263	1.59 ± 0.24	67.77	0.39	0.053 ± 0.001
15D00276	14.7 %	✓	0.0069729	114.2937	0.097687	6.2319	2.968	1.49 ± 0.35	58.95	0.29	0.023 ± 0.000
15D00277	16.5 %	✓	0.0099672	162.4325	0.034473	4.3081	2.047	1.49 ± 0.52	40.97	0.20	0.011 ± 0.000
15D00278	18.3 %	✓	0.0078112	140.3645	0.075634	2.3221	1.234	1.66 ± 0.93	34.82	0.11	0.007 ± 0.000
15D00280	20.2 %	✓	0.0113127	236.1813	0.067382	2.4064	1.289	1.68 ± 0.95	27.82	0.11	0.004 ± 0.000
15D00281	22.2 %	✓	0.0094149	188.6925	0.015211	1.7557	1.249	2.23 ± 1.21	30.98	0.08	0.004 ± 0.000
15D00283	24.5 %	✓	0.0136150	307.2412	0.128210	2.0390	1.663	2.55 ± 1.22	29.24	0.09	0.003 ± 0.000

Σ 3.7648609 1977.2136 45.571026 2147.4902 11335.872

Information on Analysis	Results	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD	39Ar(k) (%,n)	K/Ca ± 2σ
Sample = CAPTAINS SAMPLE Material = Groundmass Location = Kerguelen Plateau Analyst = Anthony Koppers Project = KERGUELEN   FALLOON (14- Mass Discrimination Law = LIN Irradiation = 14-OSU-06 (6C15-14) J = 0.00173028 ± 0.00000443 FCT-NM = 28.201 ± 0.023 Ma	Age Plateau Error Mean	5.27240 ± 0.40315 ± 7.65%	16.42 ± 1.25 ± 7.63%	> 100 0%	100.00 38	0.007 ± 0.007
			Full External Error ± 1.31 Analytical Error ± 1.25	1.46 > 10	2σ Confidence Limit Error Magnification	
	Total Fusion Age	5.27866 ± 0.00300 ± 0.06%	16.44 ± 0.08 ± 0.51%		38	0.467 ± 0.001
			Full External Error ± 0.38 Analytical Error ± 0.01			



Normal Isochron			39(k)/36(a) ± 2σ	40(a+r)/36(a) ± 2σ	r.i.
15D00233	1.9 %	✓	443.77 ± 7.29	3007.56 ± 49.15	0.9945
15D00234	2.0 %	✓	490.91 ± 8.09	3294.08 ± 53.99	0.9944
15D00236	2.1 %	✓	495.85 ± 8.13	3317.79 ± 54.13	0.9946
15D00237	2.2 %	✓	490.30 ± 8.52	3279.15 ± 56.70	0.9949
15D00238	2.3 %	✓	497.12 ± 8.96	3317.22 ± 59.54	0.9953
15D00240	2.4 %	✓	495.52 ± 7.89	3304.68 ± 52.37	0.9945
15D00241	2.5 %	✓	501.83 ± 9.57	3338.50 ± 63.46	0.9958
15D00242	2.6 %	✓	506.37 ± 8.70	3351.08 ± 57.35	0.9950
15D00244	2.7 %	✓	517.53 ± 9.11	3408.03 ± 59.74	0.9951
15D00245	2.8 %	✓	514.24 ± 8.96	3370.90 ± 58.45	0.9949
15D00246	2.9 %	✓	514.98 ± 10.26	3358.85 ± 66.65	0.9958
15D00248	3.0 %	✓	523.48 ± 8.62	3368.91 ± 55.17	0.9945
15D00249	3.2 %	✓	545.63 ± 8.06	3420.33 ± 50.25	0.9944
15D00250	3.4 %	✓	543.75 ± 8.87	3392.56 ± 55.11	0.9949
15D00252	3.6 %	✓	560.15 ± 9.16	3447.03 ± 56.11	0.9950
15D00253	3.8 %	✓	561.69 ± 13.38	3478.04 ± 82.61	0.9967
15D00254	4.0 %	✓	571.12 ± 11.34	3441.93 ± 68.13	0.9963
15D00256	4.3 %	✓	589.20 ± 14.32	3501.07 ± 84.88	0.9968
15D00257	4.6 %	✓	621.35 ± 13.77	3452.59 ± 76.28	0.9968
15D00258	4.9 %	✓	646.62 ± 16.41	3459.36 ± 87.57	0.9971
15D00260	5.2 %	✓	702.36 ± 21.05	3468.22 ± 103.76	0.9978
15D00261	5.5 %	✓	780.06 ± 25.94	3432.68 ± 113.96	0.9977
15D00262	5.8 %	✓	863.30 ± 36.53	3447.10 ± 145.72	0.9983
15D00264	6.1 %	✓	995.21 ± 57.88	3499.44 ± 203.40	0.9988
15D00265	6.5 %	✓	1053.74 ± 79.79	3312.19 ± 250.75	0.9989
15D00266	7.0 %	✓	1531.86 ± 134.03	3374.28 ± 295.23	0.9992
15D00268	7.6 %	✓	1418.33 ± 211.25	3368.44 ± 501.74	0.9992
15D00269	8.4 %	✓	2098.46 ± 334.61	3067.76 ± 489.34	0.9993
15D00270	9.4 %	✓	2265.94 ± 601.15	3097.47 ± 822.05	0.9994
15D00272	10.5 %	✓	2317.37 ± 732.59	2306.40 ± 729.72	0.9989
15D00273	11.7 %	✓	1876.05 ± 577.67	1494.14 ± 460.95	0.9977
15D00274	13.1 %	✓	1227.07 ± 375.56	919.56 ± 282.90	0.9940
15D00276	14.7 %	✓	893.74 ± 287.59	721.12 ± 233.66	0.9916
15D00277	16.5 %	✓	432.22 ± 101.80	500.91 ± 119.44	0.9831
15D00278	18.3 %	✓	297.28 ± 85.54	453.54 ± 132.23	0.9746
15D00280	20.2 %	✓	212.72 ± 45.26	409.46 ± 88.01	0.9694
15D00281	22.2 %	✓	186.49 ± 44.03	428.20 ± 101.87	0.9634
15D00283	24.5 %	✓	149.76 ± 29.18	417.68 ± 81.36	0.9663

Results	40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD
Normal Isochron Error Chron	14059.41 ± 4207.51 ± 29.93%	20.67215 ± 7.99997 ± 38.70%	65.87 ± 25.96 ± 39.42% Full External Error ± 26.01 Analytical Error ± 25.96	> 100 0%
Statistics	2σ Confidence Limit Error Magnification Number of Data Points	1.47 > 10 38	Convergence Number of Iterations Calculated Line	0.000060187242 9 Weighted York-2



Inverse Isochron			39(k)/40(a+r) ± 2σ	36(a)/40(a+r) ± 2σ	r.i.
15D00233	1.9 %	✓	0.1475520 ± 0.0002533	0.00033250 ± 0.00000543	0.0056
15D00234	2.0 %	✓	0.1490272 ± 0.0002586	0.00030357 ± 0.00000498	0.0051
15D00236	2.1 %	✓	0.1494520 ± 0.0002550	0.00030141 ± 0.00000492	0.0052
15D00237	2.2 %	✓	0.1495193 ± 0.0002627	0.00030496 ± 0.00000527	0.0055
15D00238	2.3 %	✓	0.1498608 ± 0.0002626	0.00030146 ± 0.00000541	0.0056
15D00240	2.4 %	✓	0.1499463 ± 0.0002497	0.00030260 ± 0.00000480	0.0050
15D00241	2.5 %	✓	0.1503150 ± 0.0002631	0.00029954 ± 0.00000569	0.0052
15D00242	2.6 %	✓	0.1511052 ± 0.0002596	0.00029841 ± 0.00000511	0.0056
15D00244	2.7 %	✓	0.1518564 ± 0.0002656	0.00029342 ± 0.00000514	0.0051
15D00245	2.8 %	✓	0.1525518 ± 0.0002683	0.00029666 ± 0.00000514	0.0060
15D00246	2.9 %	✓	0.1533208 ± 0.0002783	0.00029772 ± 0.00000591	0.0051
15D00248	3.0 %	✓	0.1553860 ± 0.0002684	0.00029683 ± 0.00000486	0.0055
15D00249	3.2 %	✓	0.1595270 ± 0.0002496	0.00029237 ± 0.00000430	0.0041
15D00250	3.4 %	✓	0.1602780 ± 0.0002640	0.00029476 ± 0.00000479	0.0051
15D00252	3.6 %	✓	0.1625024 ± 0.0002658	0.00029011 ± 0.00000472	0.0046
15D00253	3.8 %	✓	0.1614953 ± 0.0003139	0.00028752 ± 0.00000683	0.0065
15D00254	4.0 %	✓	0.1659297 ± 0.0002835	0.00029053 ± 0.00000575	0.0056
15D00256	4.3 %	✓	0.1682923 ± 0.0003258	0.00028563 ± 0.00000693	0.0067
15D00257	4.6 %	✓	0.1799651 ± 0.0003190	0.00028964 ± 0.00000640	0.0062
15D00258	4.9 %	✓	0.1869201 ± 0.0003579	0.00028907 ± 0.00000732	0.0075
15D00260	5.2 %	✓	0.2025127 ± 0.0004045	0.00028833 ± 0.00000863	0.0086
15D00261	5.5 %	✓	0.2272454 ± 0.0005091	0.00029132 ± 0.00000967	0.0102
15D00262	5.8 %	✓	0.2504436 ± 0.0006182	0.00029010 ± 0.00001226	0.0124
15D00264	6.1 %	✓	0.2843924 ± 0.0008178	0.00028576 ± 0.00001661	0.0137
15D00265	6.5 %	✓	0.3181404 ± 0.0011260	0.00030192 ± 0.00002286	0.0182
15D00266	7.0 %	✓	0.4539828 ± 0.0016106	0.00029636 ± 0.00002593	0.0210
15D00268	7.6 %	✓	0.4210636 ± 0.0024592	0.00029687 ± 0.00004422	0.0207
15D00269	8.4 %	✓	0.6840370 ± 0.0041740	0.00032597 ± 0.00005200	0.0283
15D00270	9.4 %	✓	0.7315451 ± 0.0069147	0.00032284 ± 0.00008568	0.0279
15D00272	10.5 %	✓	1.0047566 ± 0.0150069	0.00043358 ± 0.00013718	0.0411
15D00273	11.7 %	✓	1.2556009 ± 0.0261226	0.00066928 ± 0.00020647	0.0618
15D00274	13.1 %	✓	1.3344090 ± 0.0448618	0.00108748 ± 0.00033456	0.1015
15D00276	14.7 %	✓	1.2393730 ± 0.0520017	0.00138673 ± 0.00044934	0.1181
15D00277	16.5 %	✓	0.8628796 ± 0.0376317	0.00199637 ± 0.00047604	0.1580
15D00278	18.3 %	✓	0.6554701 ± 0.0428447	0.00220488 ± 0.00064283	0.1702
15D00280	20.2 %	✓	0.5195081 ± 0.0275044	0.00244226 ± 0.00052493	0.1638
15D00281	22.2 %	✓	0.4355156 ± 0.0279482	0.00233538 ± 0.00055559	0.1631
15D00283	24.5 %	✓	0.3585663 ± 0.0181279	0.00239420 ± 0.00046636	0.1287

Results	40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD
Inverse Isochron Error Chron	3344.02 ± 286.75 ± 8.58%	0.02748 ± 0.00913 ± 33.22%	0.09 ± 0.03 ± 33.22%	16.89 0%
			Full External Error ± 0.03 Analytical Error ± 0.03	
Statistics	2σ Confidence Limit Error Magnification Number of Data Points Spreading Factor	1.47 4.1097 38 3.3%	Convergence Number of Iterations Calculated Line	0.0047624624 5 Weighted York-2



OSU Argon Geochronology Lab																	
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	
15D00233	1.9 %	✓	0.2037626	0.788	26.1815	0.842	2.829845	1.398	87.2875	0.083	591.540	0.020	6.11139 ± 0.01516	19.02 ± 0.05	90.16	4.06	1.433 ± 0.024
15D00234	2.0 %	✓	0.1920533	0.788	26.6795	0.822	2.920077	1.358	90.7420	0.085	608.867	0.019	6.10824 ± 0.01452	19.01 ± 0.04	91.02	4.22	1.462 ± 0.024
15D00236	2.1 %	✓	0.1913714	0.784	27.0988	0.801	2.925454	1.407	91.2628	0.083	610.620	0.019	6.09517 ± 0.01427	18.97 ± 0.04	91.08	4.25	1.448 ± 0.023
15D00237	2.2 %	✓	0.1819591	0.831	25.2043	0.858	2.820273	1.366	85.8719	0.085	574.293	0.020	6.08540 ± 0.01497	18.94 ± 0.05	90.97	4.00	1.465 ± 0.025
15D00238	2.3 %	✓	0.1750434	0.862	24.8142	0.854	2.759417	1.465	83.6820	0.085	558.371	0.021	6.07844 ± 0.01512	18.92 ± 0.05	91.08	3.90	1.450 ± 0.025
15D00240	2.4 %	✓	0.1990744	0.761	27.8689	0.767	3.116313	1.224	94.9116	0.081	632.941	0.018	6.07272 ± 0.01388	18.90 ± 0.04	91.04	4.42	1.464 ± 0.023
15D00241	2.5 %	✓	0.1737631	0.912	25.1155	0.877	2.757705	1.376	83.7917	0.085	557.413	0.021	6.06384 ± 0.01546	18.87 ± 0.05	91.13	3.90	1.434 ± 0.025
15D00242	2.6 %	✓	0.1819603	0.821	26.4680	0.799	2.910086	1.284	88.5150	0.083	585.756	0.020	6.03433 ± 0.01444	18.78 ± 0.04	91.17	4.12	1.438 ± 0.023
15D00244	2.7 %	✓	0.1762406	0.840	26.4063	0.824	2.877041	1.379	87.5158	0.085	576.278	0.020	6.01419 ± 0.01456	18.72 ± 0.05	91.32	4.07	1.425 ± 0.024
15D00245	2.8 %	✓	0.1697091	0.831	25.3518	0.843	2.806686	1.435	83.7441	0.085	548.928	0.021	5.98051 ± 0.01453	18.62 ± 0.05	91.22	3.90	1.420 ± 0.024
15D00246	2.9 %	✓	0.1663470	0.950	25.1840	0.847	2.751238	1.440	82.1586	0.088	535.833	0.021	5.94847 ± 0.01573	18.52 ± 0.05	91.19	3.83	1.403 ± 0.024
15D00248	3.0 %	✓	0.1843290	0.783	28.9535	0.760	3.064157	1.272	92.3982	0.084	594.605	0.020	5.87110 ± 0.01376	18.28 ± 0.04	91.21	4.30	1.372 ± 0.021
15D00249	3.2 %	✓	0.2448333	0.701	40.0723	0.581	4.320128	0.949	127.6766	0.077	800.304	0.015	5.72696 ± 0.01201	17.83 ± 0.04	91.35	5.94	1.370 ± 0.016
15D00250	3.4 %	✓	0.2006232	0.775	33.3603	0.678	3.528071	1.123	104.1864	0.080	650.001	0.019	5.69571 ± 0.01291	17.73 ± 0.04	91.27	4.85	1.343 ± 0.018
15D00252	3.6 %	✓	0.2059031	0.774	36.0802	0.628	3.745494	1.075	109.8755	0.080	676.108	0.018	5.62622 ± 0.01262	17.52 ± 0.04	91.41	5.12	1.309 ± 0.017
15D00253	3.8 %	✓	0.1227505	1.130	21.4289	0.991	2.242730	1.752	65.6940	0.093	406.763	0.027	5.66604 ± 0.01671	17.64 ± 0.05	91.49	3.06	1.318 ± 0.026
15D00254	4.0 %	✓	0.1610116	0.940	29.0487	0.743	3.032619	1.261	87.4716	0.083	527.131	0.022	5.50924 ± 0.01395	17.16 ± 0.04	91.40	4.07	1.295 ± 0.019
15D00256	4.3 %	✓	0.1181975	1.148	22.4908	0.956	2.250816	1.792	66.0643	0.093	392.533	0.028	5.44052 ± 0.01614	16.94 ± 0.05	91.54	3.08	1.263 ± 0.024
15D00257	4.6 %	✓	0.1394479	1.043	28.2456	0.773	2.852622	1.435	81.9028	0.085	455.081	0.025	5.08105 ± 0.01388	15.83 ± 0.04	91.42	3.81	1.247 ± 0.019
15D00258	4.9 %	✓	0.1107298	1.192	23.3696	0.918	2.350274	1.673	67.5168	0.091	361.191	0.030	4.89289 ± 0.01494	15.24 ± 0.05	91.44	3.14	1.242 ± 0.023
15D00260	5.2 %	✓	0.0927527	1.400	21.6147	0.985	2.112845	1.889	61.0451	0.093	301.428	0.036	4.51724 ± 0.01555	14.08 ± 0.05	91.46	2.84	1.214 ± 0.024
15D00261	5.5 %	✓	0.0761037	1.541	19.7853	1.028	1.885430	2.055	55.1986	0.103	242.900	0.044	4.02171 ± 0.01554	12.54 ± 0.05	91.37	2.57	1.199 ± 0.025
15D00262	5.8 %	✓	0.0575402	1.943	16.8793	1.262	1.546172	2.622	45.7434	0.109	182.650	0.057	3.65062 ± 0.01714	11.39 ± 0.05	91.40	2.13	1.165 ± 0.030
15D00264	6.1 %	✓	0.0427191	2.638	14.3667	1.425	1.271981	3.068	38.6601	0.122	135.944	0.076	3.21935 ± 0.01970	10.05 ± 0.06	91.53	1.80	1.157 ± 0.033
15D00265	6.5 %	✓	0.0312726	3.406	11.4308	1.768	0.940780	4.155	29.7124	0.138	93.400	0.110	2.86284 ± 0.02369	8.94 ± 0.07	91.05	1.38	1.117 ± 0.040
15D00266	7.0 %	✓	0.0275912	3.764	14.1638	1.428	1.060848	3.805	36.4404	0.123	80.284	0.128	2.00982 ± 0.01846	6.28 ± 0.06	91.20	1.70	1.106 ± 0.032
15D00268	7.6 %	✓	0.0163847	6.439	8.1561	2.542	0.600371	6.456	20.1333	0.200	47.823	0.212	2.16659 ± 0.03376	6.77 ± 0.11	91.19	0.94	1.061 ± 0.054
15D00269	8.4 %	✓	0.0159970	6.270	12.7179	1.635	0.647478	6.068	26.4532	0.155	38.686	0.262	1.32109 ± 0.02408	4.13 ± 0.08	90.31	1.23	0.894 ± 0.029
15D00270	9.4 %	✓	0.0113291	9.050	13.4945	1.576	0.423159	9.884	17.5527	0.220	23.999	0.418	1.23656 ± 0.03684	3.86 ± 0.12	90.39	0.82	0.559 ± 0.018
15D00272	10.5 %	✓	0.0130046	7.626	25.4063	0.831	0.278491	14.661	14.5823	0.267	14.511	0.696	0.86775 ± 0.04288	2.71 ± 0.13	87.10	0.68	0.247 ± 0.004
15D00273	11.7 %	✓	0.0206073	5.058	52.3039	0.489	0.267306	15.926	12.7659	0.300	10.152	0.994	0.63892 ± 0.05116	2.00 ± 0.16	80.12	0.59	0.105 ± 0.001
15D00274	13.1 %	✓	0.0248621	4.192	68.2659	0.417	0.182138	21.728	8.4276	0.447	6.290	1.618	0.50858 ± 0.07771	1.59 ± 0.24	67.77	0.39	0.053 ± 0.001
15D00276	14.7 %	✓	0.0371571	3.004	114.2937	0.338	0.171498	22.294	6.3088	0.615	5.035	2.001	0.47623 ± 0.11128	1.49 ± 0.35	58.95	0.29	0.023 ± 0.000
15D00277	16.5 %	✓	0.0528531	2.201	162.4325	0.313	0.087619	47.003	4.4174	0.784	4.997	2.025	0.47524 ± 0.16755	1.49 ± 0.52	40.97	0.20	0.011 ± 0.000
15D00278	18.3 %	✓	0.0448757	2.474	140.3645	0.324	0.105471	37.329	2.4166	1.541	3.545	2.846	0.53161 ± 0.29769	1.66 ± 0.93	34.82	0.11	0.007 ± 0.000
15D00280	20.2 %	✓	0.0736719	1.597	236.1813	0.299	0.100164	38.639	2.5653	1.437	4.634	2.158	0.53572 ± 0.30452	1.68 ± 0.95	27.82	0.11	0.004 ± 0.000
15D00281	22.2 %	✓	0.0592314	1.831	188.6925	0.306	0.039574	102.384	1.8827	1.881	4.033	2.494	0.71156 ± 0.38705	2.23 ± 1.21	30.98	0.08	0.004 ± 0.000
15D00283	24.5 %	✓	0.0947407	1.353	307.2412	0.293	0.158230	25.300	2.2458	1.629	5.689	1.779	0.81578 ± 0.39179	2.55 ± 1.22	29.24	0.09	0.003 ± 0.000
Σ			4.2918046	0.191	1977.2136	0.098	70.740600	0.346	2148.8209	0.018	12450.557	0.005					

Information on Analysis and Constants Used in Calculations		Results						
		40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD	39Ar(k) (%.n)	K/Ca ± 2σ	
Sample = CAPTAINS SAMPLE	Age Equations = Min et al. (2000)							
Material = Groundmass	Negative Intensities = Allowed							
Location = Kerguelen Plateau	Decay Constant 40K = 5.530 ± 0.048 E-10 1/a		5.27240 ± 0.40315 ± 7.65%	16.42 ± 1.25 ± 7.63%	> 100	100.00	0.007 ± 0.007	
Analyst = Anthony Koppers	Decay Constant 39Ar = 2.940 ± 0.016 E-07 1/h			Full External Error ± 1.31	0%	38		
Project = KERGUELEN   FALLOON (14-PIL-01)	Decay Constant 37Ar = 8.230 ± 0.012 E-04 1/h			Analytical Error ± 1.25	1.46	2σ Confidence Limit		
Mass Discrimination Law = LIN	Decay Constant 36Cl = 2.257 ± 0.015 E-06 1/a				> 10	Error Magnification		
Irradiation = 14-OSU-06 (6C15-14)	Decay Constant 40K(EC,β <sup>+</sup> ) = 0.580 ± 0.009 E-10 1/a							
J = 0.00173028 ± 0.00000443	Decay Constant 40K(β <sup>-</sup> ) = 4.950 ± 0.043 E-10 1/a							
FCT-NM = 28.201 ± 0.023 Ma	Atmospheric Ratio 40/36(a) = 295.50		5.27866 ± 0.00300 ± 0.06%	16.44 ± 0.08 ± 0.51%		38	0.467 ± 0.001	
IGSN = Undefined	Atmospheric Ratio 38/36(a) = 0.1869			Full External Error ± 0.38				
Preferred Age = Undefined	Production Ratio 39/37(ca) = 0.000673			Analytical Error ± 0.01				
Classification = Undefined	Production Ratio 38/37(ca) = 0.000014	14059.41 ± 4207.51 ± 29.93%	20.67215 ± 7.99997 ± 38.70%	65.87 ± 25.96 ± 39.42%	> 100	100.00		
Experiment Type = Incremental Heating	Production Ratio 36/37(ca) = 0.000264			Full External Error ± 26.01	0%	38		
Extraction Method = Undefined	Production Ratio 40/39(k) = 0.001010			Analytical Error ± 25.96	1.47	2σ Confidence Limit		
Heating = 77 sec	Production Ratio 38/39(k) = 0.011380				> 10	Error Magnification		
Isolation = 6.00 min	Production Ratio 36/38(cl) = 262.80 ± 1.71				9	Number of Iterations		
Instrument = ARGUS-VI-D	Scaling Ratio K/Ca = 0.430				0.0000601872	Convergence		
Lithology = Undefined	Abundance Ratio 40K/K = 1.1700 ± 0.0100 E-04							
Lat-Lon = Undefined - Undefined	Atomic Weight K = 39.0983 ± 0.0001 g	3344.02 ± 286.75 ± 8.58%	0.02748 ± 0.00913 ± 33.22%	0.09 ± 0.03 ± 33.22%	16.89	100.00		
Collector Calibrations = 40Ar 36Ar				Full External Error ± 0.03	0%	38		
					1.47	2σ Confidence Limit		



OSU Argon Geochronology Lab																																																
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
15D00233	1.9 %	✓	0.1966552	0.82	0.0000000	0.00	0.0069119	0.84	0.0001954	2.38	26.1815	0.84	0.0367549	0.82	0.0000000	0.00	0.993131	0.08	0.0003639	0.84	1.799595	2.55	87.2699	0.08	0.0176202	0.84	533.340	0.09	58.1116	0.82	0.0000000	0.00	0.0881426	0.08														
15D00234	2.0 %	✓	0.1848087	0.82	0.0000000	0.00	0.0070434	0.82	0.0002012	2.33	26.6795	0.82	0.0345407	0.82	0.0000000	0.00	1.032440	0.08	0.0003708	0.82	1.852725	2.50	90.7241	0.08	0.0179553	0.82	554.165	0.08	54.6110	0.82	0.0000000	0.00	0.0916313	0.08														
15D00236	2.1 %	✓	0.1840160	0.82	0.0000000	0.00	0.0071541	0.80	0.0002013	2.40	27.0988	0.80	0.0343926	0.82	0.0000000	0.00	1.038363	0.08	0.0003767	0.80	1.852322	2.57	91.2445	0.08	0.0182375	0.80	556.151	0.08	54.3767	0.82	0.0000000	0.00	0.0921570	0.08														
15D00237	2.2 %	✓	0.1751084	0.86	0.0000000	0.00	0.0066539	0.86	0.0001967	2.32	25.2043	0.86	0.0327278	0.86	0.0000000	0.00	0.977029	0.09	0.0003503	0.86	1.810166	2.50	85.8549	0.09	0.0169625	0.86	522.462	0.09	51.7445	0.86	0.0000000	0.00	0.0867135	0.09														
15D00238	2.3 %	✓	0.1682995	0.90	0.0000000	0.00	0.0065509	0.85	0.0001930	2.46	24.8142	0.85	0.0314552	0.90	0.0000000	0.00	0.952111	0.09	0.0003449	0.85	1.775506	2.62	83.6653	0.09	0.0166999	0.85	508.554	0.09	49.7325	0.90	0.0000000	0.00	0.0845019	0.09														
15D00240	2.4 %	✓	0.1914996	0.79	0.0000000	0.00	0.0073574	0.77	0.0002174	2.12	27.8689	0.77	0.0357913	0.79	0.0000000	0.00	1.079880	0.08	0.0003874	0.77	2.000254	2.31	94.8928	0.08	0.0187557	0.77	576.257	0.08	56.5881	0.79	0.0000000	0.00	0.0958417	0.08														
15D00241	2.5 %	✓	0.1669399	0.95	0.0000000	0.00	0.0066305	0.88	0.0001927	2.33	25.1155	0.88	0.0312011	0.95	0.0000000	0.00	0.953357	0.08	0.0003491	0.88	1.772798	2.50	83.7748	0.08	0.0169028	0.88	507.997	0.10	49.3307	0.95	0.0000000	0.00	0.0846125	0.08														
15D00242	2.6 %	✓	0.1747694	0.86	0.0000000	0.00	0.0069876	0.80	0.0002033	2.20	26.4680	0.80	0.0326644	0.86	0.0000000	0.00	1.007098	0.08	0.0003679	0.80	1.869955	2.38	88.4972	0.08	0.0178130	0.80	534.022	0.09	51.6444	0.86	0.0000000	0.00	0.0893822	0.08														
15D00244	2.7 %	✓	0.1690682	0.88	0.0000000	0.00	0.0069713	0.82	0.0002011	2.33	26.4063	0.82	0.0315989	0.88	0.0000000	0.00	0.995728	0.09	0.0003670	0.82	1.849347	2.51	87.4981	0.09	0.0177714	0.82	526.230	0.09	49.9597	0.88	0.0000000	0.00	0.0883731	0.09														
15D00245	2.8 %	✓	0.1628180	0.87	0.0000000	0.00	0.0066929	0.84	0.0001983	2.39	25.3518	0.84	0.0304307	0.87	0.0000000	0.00	0.952814	0.09	0.0003524	0.84	1.823089	2.56	83.7270	0.09	0.0170618	0.84	500.731	0.09	48.1127	0.87	0.0000000	0.00	0.0845643	0.09														
15D00246	2.9 %	✓	0.1595041	0.99	0.0000000	0.00	0.0066486	0.85	0.0001943	2.40	25.1840	0.85	0.0298113	0.99	0.0000000	0.00	0.934772	0.09	0.0003501	0.85	1.786305	2.57	82.1417	0.09	0.0169488	0.85	488.617	0.10	47.1335	0.99	0.0000000	0.00	0.0829631	0.09														
15D00248	3.0 %	✓	0.1764699	0.82	0.0000000	0.00	0.0076437	0.76	0.0002154	2.17	28.9535	0.76	0.0329822	0.82	0.0000000	0.00	1.051270	0.08	0.0004025	0.76	1.979503	2.36	92.3788	0.08	0.0194857	0.76	542.365	0.08	52.1468	0.82	0.0000000	0.00	0.0933025	0.08														
15D00249	3.2 %	✓	0.2339470	0.73	0.0000000	0.00	0.0105791	0.58	0.0003072	1.72	40.0723	0.58	0.0437247	0.73	0.0000000	0.00	1.452653	0.08	0.0005570	0.58	2.823194	1.95	127.6496	0.08	0.0269686	0.58	731.044	0.07	69.1313	0.73	0.0000000	0.00	0.1289261	0.08														
15D00250	3.4 %	✓	0.1915651	0.81	0.0000000	0.00	0.0088071	0.68	0.0002510	1.95	33.3603	0.68	0.0358035	0.81	0.0000000	0.00	1.185385	0.08	0.0004637	0.68	2.306419	2.15	104.1639	0.08	0.0224515	0.68	593.288	0.08	56.6075	0.81	0.0000000	0.00	0.1052056	0.08														
15D00252	3.6 %	✓	0.1961103	0.81	0.0000000	0.00	0.0095252	0.63	0.0002676	1.88	36.0802	0.63	0.0366530	0.81	0.0000000	0.00	1.250107	0.08	0.0005015	0.63	2.458232	2.09	109.8512	0.08	0.0242819	0.63	618.047	0.08	57.9506	0.81	0.0000000	0.00	0.1109497	0.08														
15D00253	3.8 %	✓	0.1169329	1.19	0.0000000	0.00	0.0056572	0.99	0.0001604	2.82	21.4289	0.99	0.0218548	1.19	0.0000000	0.00	0.747434	0.09	0.0002979	0.99	1.473143	2.97	65.6796	0.09	0.0144216	0.99	372.143	0.11	34.5537	1.19	0.0000000	0.00	0.0663364	0.09														
15D00254	4.0 %	✓	0.1531240	0.99	0.0000000	0.00	0.0076688	0.74	0.0002187	2.11	29.0487	0.74	0.0286189	0.99	0.0000000	0.00	0.995204	0.08	0.0004038	0.74	2.008392	2.31	87.4520	0.08	0.0195497	0.74	481.794	0.10	45.2482	0.99	0.0000000	0.00	0.0883265	0.08														
15D00256	4.3 %	✓	0.1120989	1.21	0.0000000	0.00	0.0059376	0.96	0.0001610	2.88	22.4908	0.96	0.0209513	1.21	0.0000000	0.00	0.751639	0.09	0.0003126	0.96	1.477913	3.02	66.0491	0.09	0.0151363	0.96	359.341	0.12	33.1252	1.21	0.0000000	0.00	0.0667096	0.09														
15D00257	4.6 %	✓	0.1317846	1.10	0.0000000	0.00	0.0074568	0.77	0.0002065	2.35	28.2456	0.77	0.0246305	1.10	0.0000000	0.00	0.931837	0.09	0.0003926	0.77	1.895761	2.52	81.8838	0.09	0.0190093	0.77	416.056	0.11	38.9423	1.10	0.0000000	0.00	0.0827026	0.09														
15D00258	4.9 %	✓	0.1043900	1.27	0.0000000	0.00	0.0061696	0.92	0.0001702	2.68	23.3696	0.92	0.0195105	1.27	0.0000000	0.00	0.768162	0.09	0.0003248	0.92	1.562276	2.83	67.5011	0.09	0.0157277	0.92	330.275	0.12	30.8473	1.27	0.0000000	0.00	0.0681761	0.09														
15D00260	5.2 %	✓	0.0868937	1.50	0.0000000	0.00	0.0057063	0.99	0.0001528	2.99	21.6147	0.99	0.0162404	1.50	0.0000000	0.00	0.694528	0.09	0.0003004	0.99	1.401777	3.13	61.0305	0.09	0.0145467	0.99	275.689	0.14	25.6771	1.50	0.0000000	0.00	0.0616409	0.09														
15D00261	5.5 %	✓	0.0707448	1.66	0.0000000	0.00	0.0052233	1.03	0.0001356	3.25	19.7853	1.03	0.0132222	1.66	0.0000000	0.00	0.628008	0.10	0.0002750	1.03	1.243924	3.38	55.1853	0.10	0.0133155	1.03	221.939	0.16	20.9051	1.66	0.0000000	0.00	0.0557371	0.10														
15D00262	5.8 %	✓	0.0529733	2.11	0.0000000	0.00	0.0044561	1.26	0.0001107	4.10	16.8793	1.26	0.0099007	2.11	0.0000000	0.00	0.520431	0.11	0.0002346	1.26	1.015606	4.20	45.7320	0.11	0.0113598	1.26	166.951	0.21	15.6536	2.11	0.0000000	0.00	0.0461894	0.11														
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Additional Parameters			40Ar/39Ar	1σ	37Ar/39Ar	1σ	36Ar/39Ar	1σ	Time (days)	37Ar (decay)	39Ar (decay)	40Ar (moles)
15D00233	1.9 %	✓	6.776915	0.005816	0.299946	0.002538	0.002334	0.000018	66.877	3.756261	1.00047288	2.839E-11
15D00234	2.0 %	✓	6.709868	0.005821	0.294015	0.002430	0.002116	0.000017	66.885	3.756880	1.00047294	2.923E-11
15D00236	2.1 %	✓	6.690786	0.005707	0.296932	0.002392	0.002097	0.000017	66.903	3.758168	1.00047306	2.931E-11
15D00237	2.2 %	✓	6.687789	0.005874	0.293510	0.002532	0.002119	0.000018	66.912	3.758838	1.00047312	2.757E-11
15D00238	2.3 %	✓	6.672538	0.005844	0.296530	0.002546	0.002092	0.000018	66.920	3.759457	1.00047318	2.680E-11
15D00240	2.4 %	✓	6.668748	0.005552	0.293630	0.002265	0.002097	0.000016	66.938	3.760747	1.00047330	3.038E-11
15D00241	2.5 %	✓	6.652362	0.005821	0.299738	0.002641	0.002074	0.000019	66.946	3.761366	1.00047336	2.676E-11
15D00242	2.6 %	✓	6.617584	0.005684	0.299023	0.002402	0.002056	0.000017	66.955	3.762036	1.00047343	2.812E-11
15D00244	2.7 %	✓	6.584840	0.005758	0.301731	0.002499	0.002014	0.000017	66.972	3.763327	1.00047355	2.766E-11
15D00245	2.8 %	✓	6.554824	0.005764	0.302730	0.002566	0.002027	0.000017	66.981	3.763946	1.00047361	2.635E-11
15D00246	2.9 %	✓	6.521939	0.005917	0.306529	0.002609	0.002025	0.000019	66.989	3.764566	1.00047367	2.572E-11
15D00248	3.0 %	✓	6.435239	0.005556	0.313356	0.002395	0.001995	0.000016	67.006	3.765857	1.00047379	2.854E-11
15D00249	3.2 %	✓	6.268215	0.004903	0.313858	0.001840	0.001918	0.000014	67.015	3.766528	1.00047385	3.841E-11
15D00250	3.4 %	✓	6.238824	0.005136	0.320198	0.002186	0.001926	0.000015	67.024	3.767149	1.00047391	3.120E-11
15D00252	3.6 %	✓	6.153405	0.005031	0.328373	0.002080	0.001874	0.000015	67.041	3.768441	1.00047404	3.245E-11
15D00253	3.8 %	✓	6.191783	0.006016	0.326192	0.003246	0.001869	0.000021	67.049	3.769061	1.00047409	1.952E-11
15D00254	4.0 %	✓	6.026310	0.005147	0.332093	0.002484	0.001841	0.000017	67.058	3.769733	1.00047416	2.530E-11
15D00256	4.3 %	✓	5.941691	0.005750	0.340439	0.003268	0.001789	0.000021	67.076	3.771026	1.00047428	1.884E-11
15D00257	4.6 %	✓	5.556353	0.004923	0.344867	0.002683	0.001703	0.000018	67.084	3.771647	1.00047434	2.184E-11
15D00258	4.9 %	✓	5.349644	0.005121	0.346130	0.003194	0.001640	0.000020	67.093	3.772319	1.00047440	1.734E-11
15D00260	5.2 %	✓	4.937795	0.004930	0.354077	0.003504	0.001519	0.000021	67.110	3.773561	1.00047452	1.447E-11
15D00261	5.5 %	✓	4.400477	0.004928	0.358438	0.003705	0.001379	0.000021	67.119	3.774234	1.00047458	1.166E-11
15D00262	5.8 %	✓	3.992933	0.004927	0.369000	0.004673	0.001258	0.000024	67.127	3.774856	1.00047464	8.767E-12
15D00264	6.1 %	✓	3.516399	0.005054	0.371614	0.005313	0.001105	0.000029	67.144	3.776150	1.00047477	6.525E-12
15D00265	6.5 %	✓	3.143463	0.005561	0.384717	0.006822	0.001053	0.000036	67.153	3.776824	1.00047483	4.483E-12
15D00266	7.0 %	✓	2.203160	0.003907	0.388685	0.005569	0.000757	0.000029	67.162	3.777445	1.00047489	3.854E-12
15D00268	7.6 %	✓	2.375300	0.006934	0.405106	0.010331	0.000814	0.000052	67.179	3.778741	1.00047501	2.295E-12
15D00269	8.4 %	✓	1.462446	0.004459	0.480770	0.007894	0.000605	0.000038	67.188	3.779363	1.00047507	1.857E-12
15D00270	9.4 %	✓	1.367272	0.006457	0.768800	0.012231	0.000645	0.000058	67.197	3.780037	1.00047513	1.152E-12
15D00272	10.5 %	✓	0.995108	0.007424	1.742271	0.015206	0.000892	0.000068	67.214	3.781333	1.00047526	6.965E-13
15D00273	11.7 %	✓	0.795243	0.008261	4.097160	0.023509	0.001614	0.000082	67.222	3.781956	1.00047531	4.873E-13
15D00274	13.1 %	✓	0.746315	0.012525	8.100226	0.049479	0.002950	0.000124	67.231	3.782578	1.00047537	3.019E-13
15D00276	14.7 %	✓	0.798020	0.016705	18.116470	0.127037	0.005890	0.000181	67.248	3.783876	1.00047550	2.417E-13
15D00277	16.5 %	✓	1.131216	0.024566	36.771312	0.310450	0.011965	0.000280	67.257	3.784551	1.00047556	2.399E-13
15D00278	18.3 %	✓	1.466956	0.047474	58.083580	0.914542	0.018570	0.000541	67.265	3.785174	1.00047562	1.702E-13
15D00280	20.2 %	✓	1.806578	0.046833	92.066137	1.351130	0.028718	0.000617	67.283	3.786472	1.00047574	2.225E-13
15D00281	22.2 %	✓	2.142198	0.066920	100.222367	1.910411	0.031460	0.000826	67.291	3.787095	1.00047580	1.936E-13
15D00283	24.5 %	✓	2.533027	0.061113	136.806397	2.264934	0.042186	0.000893	67.308	3.788394	1.00047592	2.731E-13



Procedure Blanks		36Ar [fA]	1σ	37Ar [fA]	1σ	38Ar [fA]	1σ	39Ar [fA]	1σ	40Ar [fA]	1σ
15D00233	1.9 %	0.0289735	0.0007927	0.0622914	0.0437177	0.0721636	0.0287274	0.0097224	0.0253133	8.8306695	0.0968199
15D00234	2.0 %	0.0288273	0.0007927	0.0609016	0.0437177	0.0718102	0.0287274	0.0087978	0.0253133	8.8025163	0.0968199
15D00236	2.1 %	0.0286071	0.0007927	0.0580061	0.0437177	0.0710740	0.0287274	0.0068716	0.0253133	8.7523981	0.0968199
15D00237	2.2 %	0.0285319	0.0007927	0.0565005	0.0437177	0.0706911	0.0287274	0.0058700	0.0253133	8.7303586	0.0968199
15D00238	2.3 %	0.0284831	0.0007927	0.0551107	0.0437177	0.0703377	0.0287274	0.0049454	0.0253133	8.7121498	0.0968199
15D00240	2.4 %	0.0284350	0.0007927	0.0522153	0.0437177	0.0696015	0.0287274	0.0030192	0.0253133	8.6799178	0.0968199
15D00241	2.5 %	0.0284335	0.0007927	0.0508255	0.0437177	0.0692481	0.0287274	0.0020947	0.0253133	8.6667960	0.0968199
15D00242	2.6 %	0.0284446	0.0007927	0.0493199	0.0437177	0.0688653	0.0287274	0.0010930	0.0253133	8.6540301	0.0968199
15D00244	2.7 %	0.0284954	0.0007927	0.0464245	0.0437177	0.0681290	0.0287274	0.0008331	0.0253133	8.6329963	0.0968199
15D00245	2.8 %	0.0285299	0.0007927	0.0450347	0.0437177	0.0677756	0.0287274	0.0017577	0.0253133	8.6242328	0.0968199
15D00246	2.9 %	0.0285689	0.0007927	0.0436449	0.0437177	0.0674222	0.0287274	0.0026823	0.0253133	8.6161534	0.0968199
15D00248	3.0 %	0.0286589	0.0007927	0.0407494	0.0437177	0.0666860	0.0287274	0.0046085	0.0253133	8.6010042	0.0968199
15D00249	3.2 %	0.0287072	0.0007927	0.0392438	0.0437177	0.0663032	0.0287274	0.0056101	0.0253133	8.5937747	0.0968199
15D00250	3.4 %	0.0287512	0.0007927	0.0378540	0.0437177	0.0659498	0.0287274	0.0065347	0.0253133	8.5873606	0.0968199
15D00252	3.6 %	0.0288363	0.0007927	0.0349586	0.0437177	0.0652135	0.0287274	0.0084609	0.0253133	8.5744509	0.0968199
15D00253	3.8 %	0.0288723	0.0007927	0.0335688	0.0437177	0.0648602	0.0287274	0.0093854	0.0253133	8.5683346	0.0968199
15D00254	4.0 %	0.0289064	0.0007927	0.0320632	0.0437177	0.0644773	0.0287274	0.0103870	0.0253133	8.5616848	0.0968199
15D00256	4.3 %	0.0289555	0.0007927	0.0291678	0.0437177	0.0637411	0.0287274	0.0123132	0.0253133	8.5486536	0.0968199
15D00257	4.6 %	0.0289702	0.0007927	0.0277780	0.0437177	0.0633877	0.0287274	0.0132378	0.0253133	8.5422308	0.0968199
15D00258	4.9 %	0.0289791	0.0007927	0.0262723	0.0437177	0.0630048	0.0287274	0.0142394	0.0253133	8.5351301	0.0968199
15D00260	5.2 %	0.0289757	0.0007927	0.0234927	0.0437177	0.0622981	0.0287274	0.0160886	0.0253133	8.5216404	0.0968199
15D00261	5.5 %	0.0289628	0.0007927	0.0219871	0.0437177	0.0619152	0.0287274	0.0170902	0.0253133	8.5141611	0.0968199
15D00262	5.8 %	0.0289441	0.0007927	0.0205973	0.0437177	0.0615618	0.0287274	0.0180148	0.0253133	8.5071880	0.0968199
15D00264	6.1 %	0.0288848	0.0007927	0.0177019	0.0437177	0.0608256	0.0287274	0.0199409	0.0253133	8.4926345	0.0968199
15D00265	6.5 %	0.0288439	0.0007927	0.0161963	0.0437177	0.0604428	0.0287274	0.0209426	0.0253133	8.4851828	0.0968199
15D00266	7.0 %	0.0288006	0.0007927	0.0148065	0.0437177	0.0600894	0.0287274	0.0218671	0.0253133	8.4784717	0.0968199
15D00268	7.6 %	0.0286959	0.0007927	0.0119111	0.0437177	0.0593531	0.0287274	0.0237933	0.0253133	8.4653725	0.0968199
15D00269	8.4 %	0.0286402	0.0007927	0.0105213	0.0437177	0.0589997	0.0287274	0.0247179	0.0253133	8.4597067	0.0968199
15D00270	9.4 %	0.0285771	0.0007927	0.0090156	0.0437177	0.0586169	0.0287274	0.0257195	0.0253133	8.4541916	0.0968199
15D00272	10.5 %	0.0284521	0.0007927	0.0061202	0.0437177	0.0578807	0.0287274	0.0276457	0.0253133	8.4459651	0.0968199
15D00273	11.7 %	0.0283927	0.0007927	0.0047304	0.0437177	0.0575273	0.0287274	0.0285703	0.0253133	8.4434164	0.0968199
15D00274	13.1 %	0.0283354	0.0007927	0.0033406	0.0437177	0.0571739	0.0287274	0.0294948	0.0253133	8.4419758	0.0968199
15D00276	14.7 %	0.0282283	0.0007927	0.0004452	0.0437177	0.0564377	0.0287274	0.0314210	0.0253133	8.4432405	0.0968199
15D00277	16.5 %	0.0281828	0.0007927	0.0010604	0.0437177	0.0560548	0.0287274	0.0324227	0.0253133	8.4465915	0.0968199
15D00278	18.3 %	0.0281492	0.0007927	0.0024502	0.0437177	0.0557014	0.0287274	0.0333472	0.0253133	8.4515904	0.0968199
15D00280	20.2 %	0.0281131	0.0007927	0.0053456	0.0437177	0.0549652	0.0287274	0.0352734	0.0253133	8.4687803	0.0968199
15D00281	22.2 %	0.0281159	0.0007927	0.0067354	0.0437177	0.0546118	0.0287274	0.0361980	0.0253133	8.4807331	0.0968199
15D00283	24.5 %	0.0281747	0.0007927	0.0096309	0.0437177	0.0538756	0.0287274	0.0381242	0.0253133	8.5146133	0.0968199



OSU Argon Geochronology Lab																									
Intercept Values	36Ar					37Ar					38Ar					39Ar					40Ar				
		[fA]	1σ	r2			[fA]	1σ	r2			[fA]	1σ	r2			[fA]	1σ	r2			[fA]	1σ	r2	
15D00233	1.9 %	0.2201036	0.0011333	0.0464	EXP 150 of 150	6.8981	0.0320	0.6135	EXP 150 of 150	2.721294	0.026159	0.2852	EXP 150 of 150	86.6766	0.0308	0.9971	EXP 150 of 150	602.139	0.062	0.9993	EXP 150 of 150				
15D00234	2.0 %	0.2089740	0.0010341	0.0209	EXP 149 of 150	7.0256	0.0312	0.5852	EXP 150 of 150	2.810719	0.026264	0.3248	EXP 150 of 150	90.1083	0.0352	0.9964	EXP 150 of 150	619.489	0.058	0.9994	EXP 150 of 150				
15D00236	2.1 %	0.2081142	0.0010179	0.0176	EXP 149 of 150	7.1297	0.0299	0.6692	EXP 150 of 150	2.816763	0.028431	0.1893	EXP 150 of 150	90.6273	0.0324	0.9970	EXP 150 of 150	621.197	0.059	0.9994	EXP 150 of 150				
15D00237	2.2 %	0.1992102	0.0010487	0.0591	EXP 150 of 150	6.6327	0.0304	0.5908	EXP 150 of 150	2.713318	0.024631	0.3974	EXP 150 of 150	85.2746	0.0338	0.9963	EXP 150 of 150	584.740	0.061	0.9993	EXP 150 of 150				
15D00238	2.3 %	0.1926744	0.0010540	0.0074	EXP 149 of 150	6.5284	0.0285	0.6119	EXP 150 of 150	2.653598	0.027450	0.2887	EXP 150 of 150	83.1006	0.0317	0.9967	EXP 150 of 150	568.752	0.062	0.9992	EXP 150 of 150				
15D00240	2.4 %	0.2151675	0.0010269	0.0839	EXP 150 of 150	7.3199	0.0278	0.6504	EXP 150 of 150	3.006640	0.023936	0.3862	EXP 150 of 150	94.2548	0.0303	0.9976	EXP 150 of 150	643.513	0.055	0.9996	EXP 150 of 150				
15D00241	2.5 %	0.1914239	0.0011498	0.0102	EXP 150 of 150	6.5994	0.0322	0.5387	EXP 150 of 150	2.652997	0.023719	0.3120	EXP 150 of 150	83.2124	0.0316	0.9966	EXP 150 of 150	567.745	0.060	0.9993	EXP 150 of 150				
15D00242	2.6 %	0.1991241	0.0010250	0.0087	EXP 150 of 150	6.9493	0.0272	0.6169	EXP 150 of 150	2.803801	0.022789	0.3053	EXP 150 of 150	87.9042	0.0315	0.9970	EXP 150 of 150	596.160	0.064	0.9992	EXP 150 of 150				
15D00244	2.7 %	0.1938097	0.0010159	0.0000	EXP 150 of 150	6.9280	0.0303	0.5629	EXP 150 of 150	2.771918	0.026301	0.1900	EXP 150 of 150	86.9139	0.0343	0.9964	EXP 150 of 150	586.633	0.055	0.9994	EXP 150 of 150				
15D00245	2.8 %	0.1877177	0.0009341	0.0132	EXP 150 of 150	6.6507	0.0290	0.6293	EXP 150 of 150	2.702821	0.027217	0.3198	EXP 150 of 150	83.1690	0.0322	0.9965	EXP 150 of 150	559.193	0.062	0.9992	EXP 150 of 150				
15D00246	2.9 %	0.1846030	0.0011541	0.0023	EXP 150 of 150	6.6045	0.0287	0.6150	EXP 150 of 150	2.648439	0.026241	0.3390	EXP 150 of 150	81.5954	0.0361	0.9954	EXP 150 of 150	546.051	0.057	0.9993	EXP 150 of 150				
15D00248	3.0 %	0.2015602	0.0009553	0.0594	EXP 150 of 150	7.5811	0.0302	0.6614	EXP 150 of 150	2.958071	0.025253	0.2729	EXP 150 of 150	91.7664	0.0350	0.9966	EXP 150 of 150	604.983	0.061	0.9993	EXP 150 of 150				
15D00249	3.2 %	0.2583618	0.0012072	0.0359	EXP 150 of 150	10.4734	0.0298	0.7736	EXP 150 of 150	4.198275	0.027898	0.3815	EXP 150 of 150	126.8027	0.0319	0.9985	EXP 150 of 150	811.290	0.066	0.9996	EXP 150 of 150				
15D00250	3.4 %	0.2169365	0.0010738	0.0482	EXP 150 of 150	8.7229	0.0307	0.7127	EXP 150 of 150	3.416756	0.026063	0.4031	EXP 150 of 150	103.4752	0.0325	0.9977	EXP 150 of 150	660.531	0.066	0.9994	EXP 150 of 150				
15D00252	3.6 %	0.22219741	0.0011165	0.0302	EXP 150 of 150	9.4248	0.0293	0.7671	EXP 150 of 150	3.632119	0.026956	0.3497	EXP 150 of 150	109.1271	0.0343	0.9977	EXP 150 of 150	686.704	0.062	0.9995	EXP 150 of 150				
15D00253	3.8 %	0.1440127	0.0009651	0.0400	EXP 150 of 150	5.6095	0.0298	0.4482	EXP 150 of 150	2.149032	0.025884	0.1699	EXP 150 of 150	65.2509	0.0315	0.9945	EXP 150 of 150	416.547	0.053	0.9987	EXP 150 of 150				
15D00254	4.0 %	0.1799359	0.0010789	0.0043	EXP 150 of 150	7.5894	0.0280	0.6892	EXP 150 of 150	2.929147	0.024117	0.3642	EXP 150 of 150	86.8794	0.0291	0.9974	EXP 150 of 150	537.268	0.056	0.9992	EXP 150 of 150				
15D00256	4.3 %	0.1398251	0.0009320	0.0435	EXP 150 of 150	5.8784	0.0306	0.5213	EXP 150 of 150	2.158133	0.027380	0.1636	EXP 150 of 150	65.6215	0.0311	0.9947	EXP 150 of 150	402.255	0.049	0.9988	EXP 150 of 150				
15D00257	4.6 %	0.1597728	0.0010306	0.0036	EXP 150 of 150	7.3724	0.0296	0.6508	EXP 150 of 150	2.752554	0.028161	0.2029	EXP 150 of 150	81.3518	0.0307	0.9967	EXP 150 of 150	464.983	0.052	0.9991	EXP 150 of 150				
15D00258	4.9 %	0.1328441	0.0008912	0.0225	EXP 150 of 150	6.1020	0.0301	0.5295	EXP 150 of 150	2.257048	0.025889	0.1803	EXP 150 of 150	67.0659	0.0298	0.9954	EXP 150 of 150	370.806	0.048	0.9985	EXP 150 of 150				
15D00260	5.2 %	0.1159781	0.0008810	0.0173	EXP 150 of 150	5.6411	0.0299	0.4650	EXP 150 of 150	2.023379	0.026812	0.1317	EXP 150 of 150	60.6406	0.0277	0.9951	EXP 150 of 150	310.851	0.047	0.9978	EXP 150 of 150				
15D00261	5.5 %	0.1003483	0.0007260	0.0843	EXP 150 of 150	5.1632	0.0259	0.5460	EXP 150 of 150	1.799271	0.025126	0.1762	EXP 150 of 150	54.8354	0.0332	0.9917	EXP 150 of 150	252.140	0.042	0.9965	EXP 150 of 150				
15D00262	5.8 %	0.0829170	0.0006619	0.1796	EXP 149 of 150	4.4060	0.0315	0.3367	EXP 150 of 150	1.464729	0.027780	0.1329	EXP 150 of 150	45.4463	0.0288	0.9907	EXP 150 of 150	191.703	0.038	0.9924	EXP 149 of 150				
15D00264	6.1 %	0.0689554	0.0006851	0.2232	EXP 150 of 150	3.7490	0.0283	0.3322	EXP 150 of 150	1.194799	0.025600	0.0815	EXP 150 of 150	38.4137	0.0291	0.9866	EXP 150 of 150	144.843	0.035	0.9787	EXP 150 of 150				
15D00265	6.5 %	0.0581777	0.0005984	0.2158	EXP 150 of 150	2.9845	0.0278	0.2977	EXP 150 of 150	0.868240	0.025730	0.0466	EXP 150 of 150	29.5286	0.0245	0.9834	EXP 150 of 150	102.164	0.036	0.4391	EXP 150 of 150				
15D00266	7.0 %	0.0546813	0.0005574	0.3929	EXP 150 of 150	3.6922	0.0271	0.3210	EXP 149 of 150	0.987118	0.027573	0.0225	EXP 150 of 150	36.2112	0.0267	0.9872	EXP 150 of 150	89.002	0.034	0.4300	EXP 150 of 150				
15D00268	7.6 %	0.0440648	0.0005881	0.3460	EXP 150 of 150	2.1288	0.0308	0.0503	EXP 150 of 150	0.533298	0.025257	0.0175	EXP 150 of 150	20.0184	0.0278	0.9536	EXP 150 of 150	56.431	0.031	0.9642	EXP 150 of 150				
15D00269	8.4 %	0.0436454	0.0005017	0.4252	EXP 149 of 150	3.3108	0.0302	0.2708	EXP 150 of 150	0.580153	0.026042	0.0018	EXP 150 of 150	26.2957	0.0263	0.9757	EXP 150 of 150	47.262	0.031	0.9769	EXP 150 of 150				
15D00270	9.4 %	0.0392038	0.0005412	0.4420	EXP 150 of 150	3.5102	0.0321	0.3366	EXP 150 of 150	0.359101	0.029651	0.0031	EXP 150 of 150	17.4575	0.0262	0.9445	EXP 150 of 150	32.525	0.027	0.9900	EXP 150 of 150				
15D00272	10.5 %	0.0406505	0.0004826	0.4339	EXP 150 of 150	6.5956	0.0271	0.5600	EXP 148 of 150	0.217029	0.028269	0.0086	EXP 150 of 150	14.5095	0.0275	0.9161	EXP 149 of 150	23.000	0.030	0.9906	EXP 150 of 150				
15D00273	11.7 %	0.0477224	0.0005665	0.2687	EXP 150 of 150	13.5682	0.0316	0.8430	EXP 150 of 150	0.206342	0.030669	0.0009	EXP 150 of 150	12.7065	0.0270	0.8912	EXP 150 of 150	18.626	0.030	0.9921	EXP 150 of 150				
15D00274	13.1 %	0.0516561	0.0005645	0.2585	EXP 149 of 150	17.7031	0.0315	0.9092	EXP 150 of 150	0.122622	0.026474	0.0005	EXP 150 of 150	8.3991	0.0269	0.7753	EXP 150 of 150	14.750	0.032	0.9916	EXP 150 of 150				
15D00276	14.7 %	0.0630818	0.0006728	0.1174	EXP 150 of 150	29.6241	0.0314	0.9654	EXP 150 of 150	0.112856	0.024477	0.0131	EXP 150 of 150	6.2968	0.0287	0.6165	EXP 150 of 150	13.493	0.029	0.9933	EXP 150 of 150				
15D00277	16.5 %	0.0777592	0.0007309	0.0172	EXP 150 of 150	42.0921	0.0326	0.9813	EXP 150 of 150	0.030438	0.028766	0.0110	EXP 150 of 150	4.4194	0.0231	0.4117	EXP 150 of 150	13.459	0.030	0.9925	EXP 150 of 150				
15D00278	18.3 %	0.0702428	0.0006595	0.0655	EXP 150 of 150	36.3660	0.0348	0.9715	EXP 150 of 150	0.048413	0.026177	0.0051	EXP 150 of 150	2.4333	0.0269	0.0752	EXP 149 of 150	12.007	0.029	0.9931	EXP 150 of 150				
15D00280	20.2 %	0.0972176	0.0007336	0.0011	EXP 150 of 150	61.1682	0.0329	0.9910	EXP 150 of 150	0.043911	0.025186	0.0													







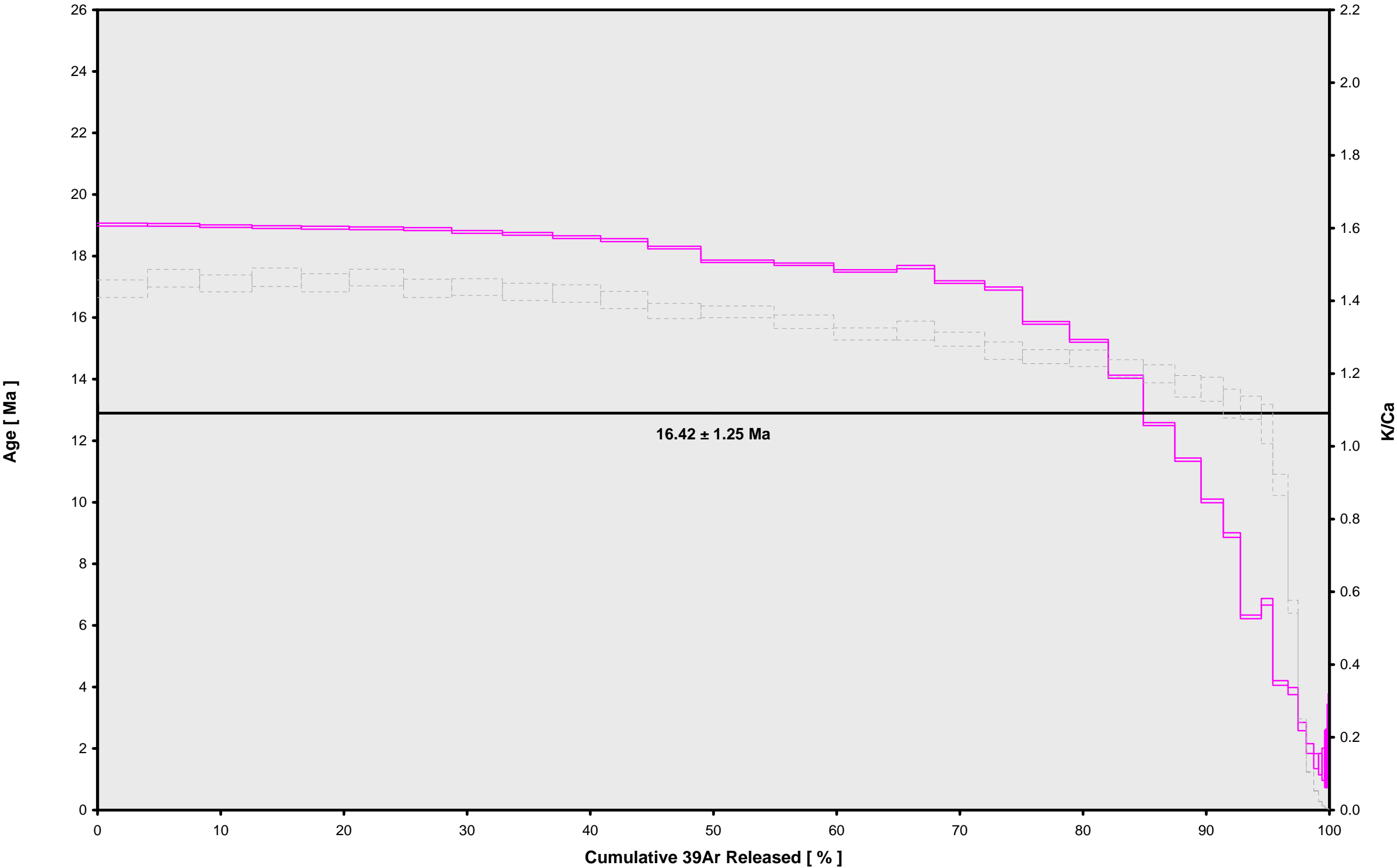
[illegible]



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	
		%1σ	0	%1σ	0	%1σ	0	%1σ	0	%1σ	0	%1σ	0	%1σ	0	%1σ	0	%1σ	0	%1σ	0	%1σ	0	%1σ	0	%1σ	0
15D00233	1.9 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D00234	2.0 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D00236	2.1 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D00237	2.2 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D00238	2.3 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D00240	2.4 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D00241	2.5 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D00242	2.6 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D00244	2.7 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D00245	2.8 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D00246	2.9 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D00248	3.0 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D00249	3.2 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D00250	3.4 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D00252	3.6 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D00253	3.8 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D00254	4.0 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D00256	4.3 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D00257	4.6 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D00258	4.9 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D00260	5.2 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D00261	5.5 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D00262	5.8 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D00264	6.1 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D00265	6.5 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D00266	7.0 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D00268	7.6 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D00269	8.4 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D00270	9.4 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D00272	10.5 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D00273	11.7 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D00274	13.1 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D00276	14.7 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D00277	16.5 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D00278	18.3 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D00280	20.2 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D00281	22.2 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
15D00283	24.5 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0



15D00232.AGE >>> CAPTAINS SAMPLE >>> KERGUELEN | FALLOON (14-PIL-01) PROJECT



**Ar-Ages in Ma**

**WEIGHTED PLATEAU**

16.42 ± 1.25

**TOTAL FUSION**

16.44 ± 0.08

**NORMAL ISOCHRON**

-65.87 ± 25.96 (NEG)

**INVERSE ISOCHRON**

0.09 ± 0.03

**MSWD (PROBABILITY)**

> 100 (0%)

**Sample Info**

Groundmass

Kerguelen Plateau

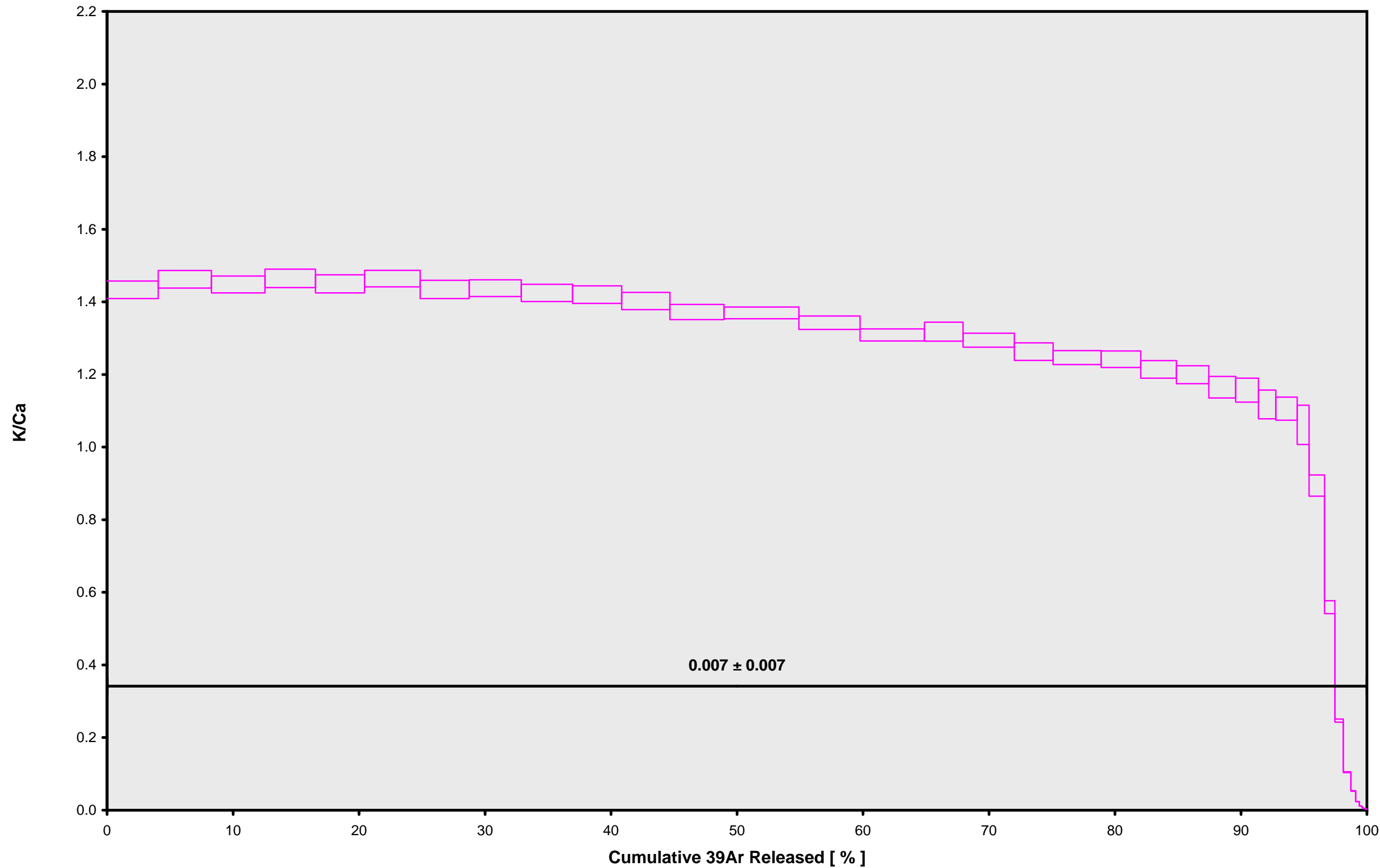
Anthony Koppers

IRR = 14-OSU-06 (6C15-14)

J = 0.00173028 ± 0.00000443



15D00232.AGE >>> CAPTAINS SAMPLE >>> KERGUELEN | FALLOON (14-PIL-01) PROJECT



**Ar-Ages in Ma**

**WEIGHTED PLATEAU**  
 $16.42 \pm 1.25$

**TOTAL FUSION**  
 $16.44 \pm 0.08$

**NORMAL ISOCHRON**  
 $-65.87 \pm 25.96$  (NEG)

**INVERSE ISOCHRON**  
 $0.09 \pm 0.03$

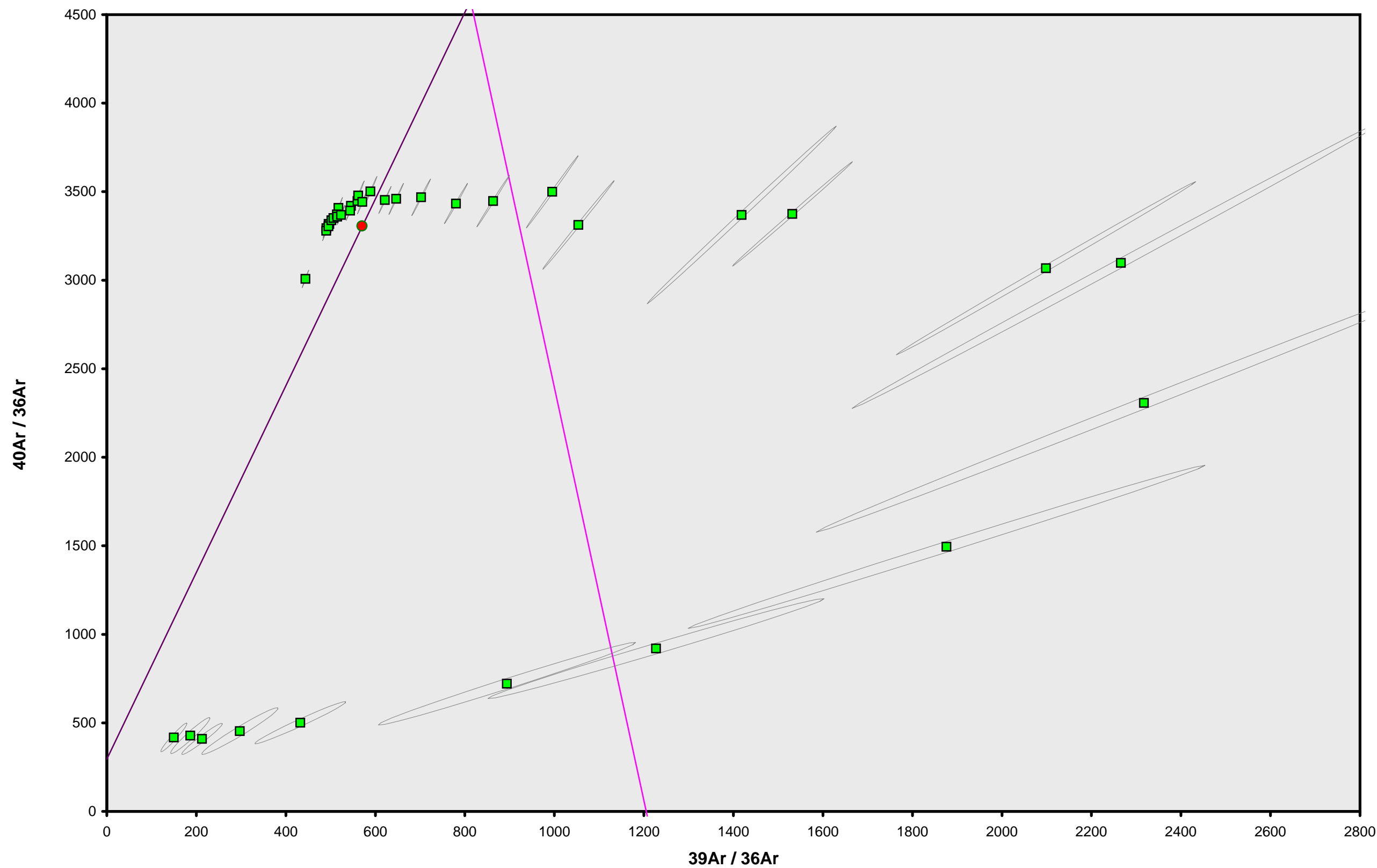
**Sample Info**

Groundmass  
Kerguelen Plateau  
Anthony Koppers

IRR = 14-OSU-06 (6C15-14)  
J =  $0.00173028 \pm 0.00000443$



15D00232.AGE >>> CAPTAINS SAMPLE >>> KERGUELEN | FALLOON (14-PIL-01) PROJECT



**Ar-Ages in Ma**

**WEIGHTED PLATEAU**  
 $16.42 \pm 1.25$

**TOTAL FUSION**  
 $16.44 \pm 0.08$

**NORMAL ISOCHRON**  
 $-65.87 \pm 25.96$  (NEG)

**INVERSE ISOCHRON**  
 $0.09 \pm 0.03$

**MSWD (PROBABILITY)**  
> 100 (0%)

**40AR/36AR INTERCEPT**  
 $14059.4 \pm 4207.5$

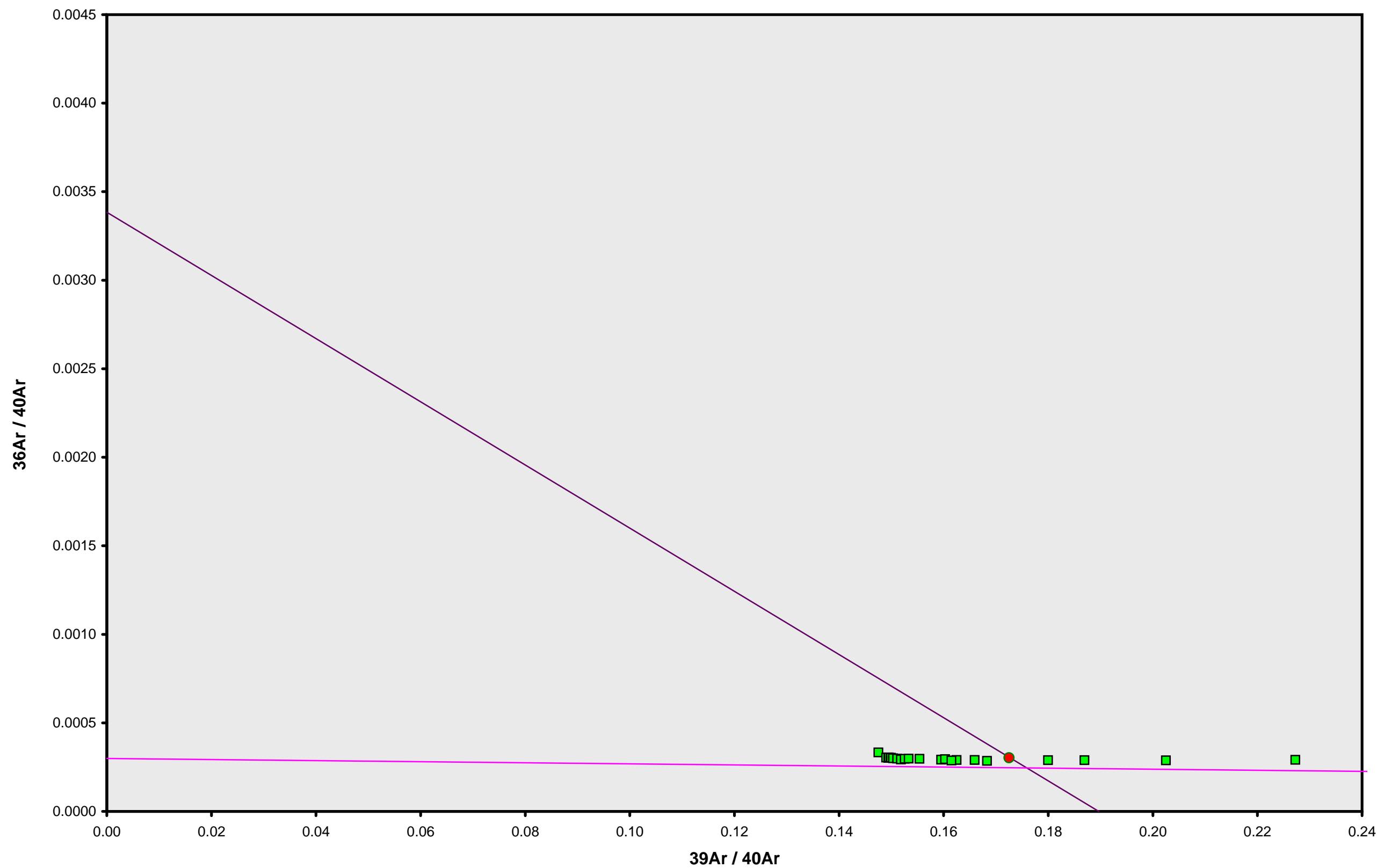
**Sample Info**

Groundmass  
Kerguelen Plateau  
Anthony Koppers

IRR = 14-OSU-06 (6C15-14)  
J =  $0.00173028 \pm 0.00000443$



15D00232.AGE >>> CAPTAINS SAMPLE >>> KERGUELEN | FALLOON (14-PIL-01) PROJECT



**Ar-Ages in Ma**

**WEIGHTED PLATEAU**  
16.42 ± 1.25

**TOTAL FUSION**  
16.44 ± 0.08

**NORMAL ISOCHRON**  
-65.87 ± 25.96 (NEG)

**INVERSE ISOCHRON**  
0.09 ± 0.03

**MSWD (PROBABILITY)**  
16.89 (0%)

**SPREADING FACTOR**  
3.3%

**40AR/36AR INTERCEPT**  
3344.0 ± 286.7

**Sample Info**

Groundmass  
Kerguelen Plateau  
Anthony Koppers

IRR = 14-OSU-06 (6C15-14)  
J = 0.00173028 ± 0.00000443



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
15D00181	1.9 %	0.9517120	3.1388	0.0537856	3.54623	30.35789	26.79 ± 2.07	9.74	3.25	0.4858 ± 0.0516
15D00182	2.0 %	0.3732153	2.4664	0.0638513	3.43962	25.87284	23.56 ± 1.26	19.00	3.15	0.5997 ± 0.0809
15D00184	2.1 %	0.1676683	2.3391	0.0652009	3.25286	22.69130	21.86 ± 1.03	31.41	2.98	0.5980 ± 0.0874
15D00185	2.2 %	0.0927967	2.4028	0.0924533	2.87086	18.98295	20.73 ± 1.08	40.91	2.63	0.5138 ± 0.0748
15D00186	2.3 %	0.0585860	2.2566	0.0251615	2.89839	19.32870	20.91 ± 1.02	52.75	2.66	0.5523 ± 0.0846
15D00188	2.4 %	0.0456026	2.4274	0.0144699	3.35028	20.78012	19.45 ± 0.83	60.66	3.07	0.5935 ± 0.0823
15D00189	2.5 %	0.0325224	1.9746	0.0378026	2.67315	16.83193	19.75 ± 1.05	63.65	2.45	0.5821 ± 0.0981
15D00190	2.6 %	0.0239594	1.8800	0.0236481	2.63778	16.18340	19.24 ± 1.02	69.56	2.42	0.6033 ± 0.1074
15D00192	2.7 %	0.0201067	2.5006	0.0384755	3.35918	20.67622	19.30 ± 0.81	77.67	3.08	0.5776 ± 0.0766
15D00193	2.8 %	0.0155606	1.8059	0.0032652	2.56136	15.87063	19.43 ± 1.05	77.53	2.35	0.6099 ± 0.1147
15D00194	2.9 %	✓ 0.0147324	2.0294	0.0443775	2.81618	16.54452	18.43 ± 0.94	79.16	2.58	0.5967 ± 0.1003
15D00196	3.0 %	✓ 0.0134036	1.9889	0.0000779	3.06154	18.43252	18.89 ± 0.89	82.30	2.81	0.6619 ± 0.1151
15D00197	3.2 %	✓ 0.0117256	2.0255	0.0708454	2.78107	15.56822	17.57 ± 0.91	81.78	2.55	0.5904 ± 0.0978
15D00198	3.4 %	✓ 0.0116713	2.3414	0.0000000	3.19439	18.01243	17.69 ± 0.82	83.92	2.93	0.5866 ± 0.0842
15D00200	3.6 %	✓ 0.0113737	2.3924	0.0110270	3.45898	19.72243	17.89 ± 0.75	85.43	3.17	0.6217 ± 0.0912
15D00201	3.8 %	✓ 0.0103375	2.5006	0.0454184	3.12834	17.23444	17.29 ± 0.83	84.93	2.87	0.5379 ± 0.0737
15D00202	4.0 %	✓ 0.0101866	2.5683	0.0126998	3.29977	18.82214	17.90 ± 0.77	86.20	3.02	0.5525 ± 0.0750
15D00204	4.3 %	✓ 0.0115843	3.0681	0.0894970	4.04705	23.76594	18.42 ± 0.65	87.40	3.71	0.5672 ± 0.0621
15D00205	4.6 %	✓ 0.0087941	2.8182	0.0524126	3.72286	21.54347	18.16 ± 0.69	89.22	3.41	0.5680 ± 0.0667
15D00206	4.9 %	✓ 0.0098284	2.7873	0.0565910	3.60083	21.25571	18.52 ± 0.72	87.97	3.30	0.5555 ± 0.0685
15D00208	5.2 %	✓ 0.0102386	3.3372	0.1247526	4.16542	23.71778	17.87 ± 0.63	88.67	3.82	0.5367 ± 0.0521
15D00209	5.5 %	✓ 0.0081227	2.6965	0.0472384	3.44221	19.91676	18.15 ± 0.75	89.23	3.16	0.5489 ± 0.0687
15D00210	5.8 %	✓ 0.0098002	2.8271	0.0450731	3.40152	19.59324	18.07 ± 0.77	87.11	3.12	0.5174 ± 0.0615
15D00212	6.1 %	✓ 0.0074703	2.7534	0.0439482	3.42007	20.08611	18.42 ± 0.76	90.08	3.13	0.5341 ± 0.0654
15D00213	6.5 %	✓ 0.0079569	2.8938	0.1083482	3.14410	18.32500	18.29 ± 0.83	88.61	2.88	0.4672 ± 0.0562
15D00214	7.0 %	✓ 0.0087564	3.6158	0.0593239	3.28034	19.01697	18.19 ± 0.78	88.01	3.01	0.3901 ± 0.0375
15D00216	7.6 %	✓ 0.0118886	5.1353	0.0834672	3.20897	18.38838	17.98 ± 0.82	83.95	2.94	0.2687 ± 0.0185
15D00217	8.4 %	✓ 0.0095433	9.4589	0.0756690	3.22642	18.04747	17.55 ± 0.78	86.47	2.96	0.1467 ± 0.0062
15D00218	9.4 %	0.0101873	24.8187	0.1203284	3.15592	16.66144	16.57 ± 0.80	84.68	2.89	0.0547 ± 0.0015
15D00220	10.5 %	0.0099327	50.7460	0.0564790	2.81220	13.58830	15.17 ± 0.90	82.22	2.58	0.0238 ± 0.0006
15D00221	11.7 %	0.0128099	108.1217	0.0614637	2.67319	9.56247	11.24 ± 0.94	71.63	2.45	0.0106 ± 0.0003
15D00222	13.1 %	0.0139003	224.0217	0.1059599	2.55211	7.80068	9.61 ± 1.03	65.49	2.34	0.0049 ± 0.0001
15D00224	14.7 %	0.0161315	328.7379	0.0307772	2.00371	5.34007	8.38 ± 1.35	52.83	1.84	0.0026 ± 0.0001
15D00225	16.5 %	0.0220345	504.7757	0.0466438	1.76282	5.35185	9.55 ± 1.78	45.11	1.62	0.0015 ± 0.0001
15D00226	18.3 %	0.0146491	501.9579	0.0431198	1.06267	4.37832	12.94 ± 2.95	50.28	0.97	0.0009 ± 0.0001
15D00228	20.2 %	0.0190710	519.7331	0.0766507	0.82147	2.86140	10.95 ± 3.75	33.67	0.75	0.0007 ± 0.0001
15D00229	22.2 %	0.0163536	509.5321	0.0707920	0.70958	2.65703	11.77 ± 4.36	35.47	0.65	0.0006 ± 0.0001
15D00231	24.5 %	0.0189526	463.5103	0.0326437	0.54965	1.33469	7.64 ± 5.51	19.24	0.50	0.0005 ± 0.0001

Σ 2.1231671 3316.3857 2.0337393 109.09310 625.10578

Information on Analysis	Results	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD	39Ar(k) (%,n)	K/Ca ± 2σ
Sample = 1180010-2 Material = Groundmass Location = Kerguelen Plateau Analyst = Anthony Koppers Project = KERGUELEN   FALLOON (14- Mass Discrimination Law = LIN Irradiation = 14-OSU-06 (6C14-14) J = 0.00174370 ± 0.00000450 FCT-NM = 28.201 ± 0.023 Ma	Age Plateau	5.76063 ± 0.05817 ± 1.01%	18.07 ± 0.20 ± 1.13% Full External Error ± 0.46 Analytical Error ± 0.18	0.96 50% 1.69 1.0000	55.37 18 2σ Confidence Limit Error Magnification	0.1998 ± 0.0589
	Total Fusion Age	5.73002 ± 0.05459 ± 0.95%	17.98 ± 0.19 ± 1.08% Full External Error ± 0.45 Analytical Error ± 0.17		38	0.0141 ± 0.0001



Normal Isochron		39(k)/36(a) ± 2σ		40(a+r)/36(a) ± 2σ	r.i.
15D00181	1.9 %		3.73 ± 0.08	327.40 ± 2.65	0.3709
15D00182	2.0 %		9.22 ± 0.21	364.82 ± 4.22	0.4808
15D00184	2.1 %		19.40 ± 0.55	430.83 ± 8.28	0.6595
15D00185	2.2 %		30.94 ± 1.23	500.07 ± 15.44	0.7588
15D00186	2.3 %		49.47 ± 2.58	625.42 ± 28.91	0.8741
15D00188	2.4 %		73.47 ± 4.34	751.18 ± 41.75	0.9293
15D00189	2.5 %		82.19 ± 6.77	813.05 ± 63.56	0.9396
15D00190	2.6 %		110.09 ± 11.46	970.95 ± 97.99	0.9618
15D00192	2.7 %		167.07 ± 20.49	1323.82 ± 160.17	0.9822
15D00193	2.8 %		164.61 ± 25.71	1315.42 ± 202.52	0.9816
15D00194	2.9 %	✓	191.16 ± 31.14	1418.50 ± 228.36	0.9847
15D00196	3.0 %	✓	228.41 ± 41.88	1670.69 ± 303.89	0.9895
15D00197	3.2 %	✓	237.18 ± 46.78	1623.21 ± 317.92	0.9899
15D00198	3.4 %	✓	273.70 ± 56.43	1838.81 ± 377.43	0.9933
15D00200	3.6 %	✓	304.12 ± 63.42	2029.53 ± 421.57	0.9943
15D00201	3.8 %	✓	302.62 ± 68.06	1962.67 ± 439.29	0.9932
15D00202	4.0 %	✓	323.93 ± 74.30	2143.23 ± 489.95	0.9950
15D00204	4.3 %	✓	349.36 ± 71.81	2347.07 ± 480.91	0.9955
15D00205	4.6 %	✓	423.34 ± 111.45	2745.26 ± 721.25	0.9969
15D00206	4.9 %	✓	366.37 ± 85.69	2458.18 ± 573.08	0.9955
15D00208	5.2 %	✓	406.84 ± 94.05	2612.01 ± 602.41	0.9966
15D00209	5.5 %	✓	423.78 ± 121.40	2747.48 ± 785.41	0.9968
15D00210	5.8 %	✓	347.09 ± 84.58	2294.77 ± 557.63	0.9958
15D00212	6.1 %	✓	457.82 ± 144.42	2984.28 ± 939.71	0.9974
15D00213	6.5 %	✓	395.14 ± 115.80	2598.55 ± 759.41	0.9961
15D00214	7.0 %	✓	374.62 ± 98.89	2467.28 ± 649.53	0.9959
15D00216	7.6 %	✓	269.92 ± 53.97	1842.23 ± 366.32	0.9923
15D00217	8.4 %	✓	338.08 ± 80.09	2186.62 ± 516.16	0.9947
15D00218	9.4 %		309.79 ± 70.23	1931.01 ± 435.83	0.9935
15D00220	10.5 %		283.12 ± 68.78	1663.53 ± 402.49	0.9933
15D00221	11.7 %		208.68 ± 40.41	1041.99 ± 200.28	0.9863
15D00222	13.1 %		183.60 ± 35.20	856.69 ± 163.08	0.9846
15D00224	14.7 %		124.21 ± 21.70	626.53 ± 107.75	0.9708
15D00225	16.5 %		80.00 ± 12.20	538.38 ± 79.74	0.9583
15D00226	18.3 %		72.54 ± 16.41	594.38 ± 128.25	0.9423
15D00228	20.2 %		43.07 ± 8.06	445.54 ± 74.05	0.8694
15D00229	22.2 %		43.39 ± 9.41	457.97 ± 88.86	0.8774
15D00231	24.5 %		29.00 ± 6.13	365.92 ± 61.45	0.7703

Results	40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD
Normal Isochron No Convergence	346.64 ± 93.17 ± 26.88%	5.57317 ± 0.29580 ± 5.31%	17.49 ± 0.93 ± 5.31%	0.94 52%
			Full External Error ± 1.01 Analytical Error ± 0.92	
Statistics	2σ Confidence Limit Error Magnification Number of Data Points	1.71 1.0000 18	Convergence Number of Iterations Calculated Line	0.000742501568 100 Weighted York-2



Inverse Isochron		39(k)/40(a+r) ± 2σ		36(a)/40(a+r) ± 2σ	r.i.
15D00181	1.9 %		0.0113811 ± 0.0002287	0.00305438 ± 0.00002472	0.0033
15D00182	2.0 %		0.0252620 ± 0.0005148	0.00274105 ± 0.00003171	0.0194
15D00184	2.1 %		0.0450302 ± 0.0009633	0.00232108 ± 0.00004463	0.0217
15D00185	2.2 %		0.0618662 ± 0.0016044	0.00199974 ± 0.00006173	0.0258
15D00186	2.3 %		0.0791026 ± 0.0020026	0.00159893 ± 0.00007391	0.0274
15D00188	2.4 %		0.0978021 ± 0.0021360	0.00133124 ± 0.00007399	0.0300
15D00189	2.5 %		0.1010939 ± 0.0028517	0.00122994 ± 0.00009615	0.0276
15D00190	2.6 %		0.1133873 ± 0.0032314	0.00102992 ± 0.00010394	0.0271
15D00192	2.7 %		0.1262006 ± 0.0029076	0.00075539 ± 0.00009139	0.0220
15D00193	2.8 %		0.1251348 ± 0.0037289	0.00076021 ± 0.00011704	0.0221
15D00194	2.9 %	✓	0.1347587 ± 0.0038284	0.00070497 ± 0.00011349	0.0209
15D00196	3.0 %	✓	0.1367168 ± 0.0036187	0.00059855 ± 0.00010887	0.0176
15D00197	3.2 %	✓	0.1461174 ± 0.0040888	0.00061606 ± 0.00012066	0.0214
15D00198	3.4 %	✓	0.1488441 ± 0.0035341	0.00054383 ± 0.00011162	0.0186
15D00200	3.6 %	✓	0.1498474 ± 0.0033178	0.00049272 ± 0.00010235	0.0169
15D00201	3.8 %	✓	0.1541876 ± 0.0040470	0.00050951 ± 0.00011404	0.0175
15D00202	4.0 %	✓	0.1511417 ± 0.0034585	0.00046659 ± 0.00010666	0.0170
15D00204	4.3 %	✓	0.1488482 ± 0.0029033	0.00042606 ± 0.00008730	0.0141
15D00205	4.6 %	✓	0.1542060 ± 0.0031953	0.00036426 ± 0.00009570	0.0135
15D00206	4.9 %	✓	0.1490409 ± 0.0033168	0.00040681 ± 0.00009484	0.0139
15D00208	5.2 %	✓	0.1557558 ± 0.0029886	0.00038285 ± 0.00008830	0.0133
15D00209	5.5 %	✓	0.1542416 ± 0.0035082	0.00036397 ± 0.00010405	0.0129
15D00210	5.8 %	✓	0.1512512 ± 0.0033848	0.00043577 ± 0.00010589	0.0154
15D00212	6.1 %	✓	0.1534102 ± 0.0035141	0.00033509 ± 0.00010552	0.0116
15D00213	6.5 %	✓	0.1520632 ± 0.0039407	0.00038483 ± 0.00011246	0.0131
15D00214	7.0 %	✓	0.1518362 ± 0.0036112	0.00040531 ± 0.00010670	0.0145
15D00216	7.6 %	✓	0.1465186 ± 0.0036246	0.00054282 ± 0.00010794	0.0182
15D00217	8.4 %	✓	0.1546144 ± 0.0037568	0.00045733 ± 0.00010795	0.0169
15D00218	9.4 %		0.1604290 ± 0.0041473	0.00051786 ± 0.00011688	0.0188
15D00220	10.5 %		0.1701950 ± 0.0047707	0.00060113 ± 0.00014544	0.0228
15D00221	11.7 %		0.2002717 ± 0.0063943	0.00095970 ± 0.00018447	0.0376
15D00222	13.1 %		0.2143147 ± 0.0071960	0.00116729 ± 0.00022221	0.0468
15D00224	14.7 %		0.1982509 ± 0.0083208	0.00159608 ± 0.00027448	0.0564
15D00225	16.5 %		0.1485979 ± 0.0064783	0.00185741 ± 0.00027509	0.0459
15D00226	18.3 %		0.1220464 ± 0.0092459	0.00168243 ± 0.00036303	0.0343
15D00228	20.2 %		0.0966793 ± 0.0089462	0.00224447 ± 0.00037306	0.0379
15D00229	22.2 %		0.0947437 ± 0.0098595	0.00218353 ± 0.00042369	0.0366
15D00231	24.5 %		0.0792560 ± 0.0106828	0.00273282 ± 0.00045896	0.0388

Results	40(a)/36(a) ± 2σ		40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD
Inverse Isochron	353.42 ± 97.28 ± 27.53%		5.58661 ± 0.27586 ± 4.94%	17.53 ± 0.87 ± 4.94%	0.91
			Full External Error ± 0.95		55%
			Analytical Error ± 0.86		
Statistics	2σ Confidence Limit	1.71	Convergence	0.0003049146	
	Error Magnification	1.0000	Number of Iterations	5	
	Number of Data Points	18	Calculated Line	Weighted York-2	
	Spreading Factor	11.7%			



OSU Argon Geochronology Lab																
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
15D00181	1.9 %	0.9525464	0.403	3.1388	5.219	0.2720603	15.445	3.54834	1.003	311.5924	0.037	8.56062 ± 0.66498	26.79 ± 2.07	9.74	3.25	0.4858 ± 0.0516
15D00182	2.0 %	0.3738733	0.567	2.4664	6.669	0.1727824	23.386	3.44128	1.013	136.1614	0.107	7.52200 ± 0.40406	23.56 ± 1.26	19.00	3.15	0.5997 ± 0.0809
15D00184	2.1 %	0.1682928	0.946	2.3391	7.231	0.1335882	31.696	3.25443	1.059	72.2406	0.149	6.97580 ± 0.33159	21.86 ± 1.03	31.41	2.98	0.5980 ± 0.0874
15D00185	2.2 %	0.0934410	1.515	2.4028	7.170	0.1425008	29.024	2.87248	1.276	46.4073	0.227	6.61228 ± 0.34490	20.73 ± 1.08	40.91	2.63	0.5138 ± 0.0748
15D00186	2.3 %	0.0591845	2.269	2.2566	7.557	0.0691262	59.807	2.89991	1.233	36.6438	0.283	6.66878 ± 0.32754	20.91 ± 1.02	52.75	2.66	0.5523 ± 0.0846
15D00188	2.4 %	0.0462450	2.723	2.4274	6.854	0.0611530	65.248	3.35191	1.049	34.2591	0.302	6.20251 ± 0.26486	19.45 ± 0.83	60.66	3.07	0.5935 ± 0.0823
15D00189	2.5 %	0.0330477	3.825	1.9746	8.313	0.0743290	57.196	2.67448	1.355	26.4450	0.390	6.29666 ± 0.33660	19.75 ± 1.05	63.65	2.45	0.5821 ± 0.0981
15D00190	2.6 %	0.0244583	4.921	1.8800	8.800	0.0581701	74.157	2.63904	1.354	23.2661	0.442	6.13525 ± 0.32637	19.24 ± 1.02	69.56	2.42	0.6033 ± 0.1074
15D00192	2.7 %	0.0207710	5.840	2.5006	6.542	0.0804957	50.771	3.36086	1.083	26.6212	0.392	6.15514 ± 0.25931	19.30 ± 0.81	77.67	3.08	0.5776 ± 0.0766
15D00193	2.8 %	0.0160377	7.448	1.8059	9.299	0.0353468	118.787	2.56257	1.402	20.4714	0.503	6.19618 ± 0.33577	19.43 ± 1.05	77.53	2.35	0.6099 ± 0.1147
15D00194	2.9 %	✓ 0.0152730	7.745	2.0294	8.297	0.0792073	52.134	2.81755	1.333	20.9008	0.489	5.87481 ± 0.30252	18.43 ± 0.94	79.16	2.58	0.5967 ± 0.1003
15D00196	3.0 %	✓ 0.0139287	8.735	1.9889	8.604	0.0374510	110.693	3.06288	1.240	22.3964	0.460	6.02067 ± 0.28651	18.89 ± 0.89	82.30	2.81	0.6619 ± 0.1151
15D00197	3.2 %	✓ 0.0122680	9.339	2.0255	8.185	0.1047137	42.198	2.78244	1.289	19.0360	0.542	5.59792 ± 0.29278	17.57 ± 0.91	81.78	2.55	0.5904 ± 0.0978
15D00198	3.4 %	✓ 0.0122894	9.730	2.3414	7.097	0.0260382	159.660	3.19596	1.087	21.4645	0.476	5.63877 ± 0.26104	17.69 ± 0.82	83.92	2.93	0.5866 ± 0.0842
15D00200	3.6 %	✓ 0.0120065	9.822	2.3924	7.262	0.0525492	82.074	3.46059	1.015	23.0869	0.441	5.70180 ± 0.23987	17.89 ± 0.75	85.43	3.17	0.6217 ± 0.0912
15D00201	3.8 %	✓ 0.0110026	10.496	2.5006	6.745	0.0829857	51.104	3.13002	1.210	20.2923	0.507	5.50913 ± 0.26416	17.29 ± 0.83	84.93	2.87	0.5379 ± 0.0737
15D00202	4.0 %	✓ 0.0108660	10.698	2.5683	6.711	0.0521908	77.310	3.30150	1.042	21.8356	0.472	5.70408 ± 0.24790	17.90 ± 0.77	86.20	3.02	0.5525 ± 0.0750
15D00204	4.3 %	✓ 0.0124039	9.555	3.0681	5.401	0.1377602	29.754	4.04911	0.899	27.1932	0.376	5.87242 ± 0.20909	18.42 ± 0.65	87.40	3.71	0.5672 ± 0.0621
15D00205	4.6 %	✓ 0.0095438	12.089	2.8182	5.799	0.0964616	42.291	3.72476	0.943	24.1459	0.429	5.78680 ± 0.22047	18.16 ± 0.69	89.22	3.41	0.5680 ± 0.0667
15D00206	4.9 %	✓ 0.0105704	10.823	2.7873	6.080	0.0994441	40.417	3.60270	1.028	24.1636	0.425	5.90300 ± 0.23087	18.52 ± 0.72	87.97	3.30	0.5555 ± 0.0685
15D00208	5.2 %	✓ 0.0111331	10.592	3.3372	4.773	0.1741151	23.385	4.16767	0.879	26.7475	0.384	5.69397 ± 0.20121	17.87 ± 0.63	88.67	3.82	0.5367 ± 0.0521
15D00209	5.5 %	✓ 0.0088397	13.118	2.6965	6.167	0.0879664	46.843	3.44403	1.040	22.3205	0.459	5.78603 ± 0.24028	18.15 ± 0.75	89.23	3.16	0.5489 ± 0.0687
15D00210	5.8 %	✓ 0.0105514	11.269	2.8271	5.857	0.0856533	46.679	3.40342	1.020	22.4926	0.458	5.76014 ± 0.24544	18.07 ± 0.77	87.11	3.12	0.5174 ± 0.0615
15D00212	6.1 %	✓ 0.0082020	14.324	2.7534	6.036	0.0843030	48.647	3.42192	1.049	22.2971	0.458	5.87302 ± 0.24503	18.42 ± 0.76	90.08	3.13	0.5341 ± 0.0654
15D00213	6.5 %	✓ 0.0087326	13.296	2.8938	5.892	0.1456554	28.779	3.14605	1.196	20.6794	0.498	5.82838 ± 0.26728	18.29 ± 0.83	88.61	2.88	0.4672 ± 0.0562
15D00214	7.0 %	✓ 0.0097174	11.844	3.6158	4.687	0.0983410	42.004	3.28278	1.089	21.6078	0.477	5.79725 ± 0.25092	18.19 ± 0.78	88.01	3.01	0.3901 ± 0.0375
15D00216	7.6 %	✓ 0.0132534	8.902	5.1353	3.246	0.1222786	34.093	3.21243	1.142	21.9047	0.473	5.73030 ± 0.26193	17.98 ± 0.82	83.95	2.94	0.2687 ± 0.0185
15D00217	8.4 %	✓ 0.0120487	9.333	9.4589	1.799	0.1143007	36.006	3.23278	1.108	20.8708	0.493	5.59366 ± 0.24898	17.55 ± 0.78	86.47	2.96	0.1467 ± 0.0062
15D00218	9.4 %	0.0167525	6.849	24.8187	0.722	0.1584918	25.710	3.17263	1.176	19.6750	0.523	5.27942 ± 0.25706	16.57 ± 0.80	84.68	2.89	0.0547 ± 0.0015
15D00220	10.5 %	0.0233358	5.136	50.7460	0.444	0.0910437	46.212	2.84636	1.241	16.5263	0.621	4.83190 ± 0.28926	15.17 ± 0.90	82.22	2.58	0.0238 ± 0.0006
15D00221	11.7 %	0.0413607	2.959	108.1217	0.329	0.0957816	44.422	2.74595	1.367	13.3505	0.759	3.57718 ± 0.29910	11.24 ± 0.94	71.63	2.45	0.0106 ± 0.0003
15D00222	13.1 %	0.0730535	1.788	224.0217	0.296	0.1407148	28.503	2.70287	1.359	11.9108	0.864	3.05657 ± 0.32764	9.61 ± 1.03	65.49	2.34	0.0049 ± 0.0001
15D00224	14.7 %	0.1029216	1.316	328.7379	0.289	0.0611639	67.358	2.22495	1.657	10.1089	1.009	2.66509 ± 0.43019	8.38 ± 1.35	52.83	1.84	0.0026 ± 0.0001
15D00225	16.5 %	0.1553004	1.014	504.7757	0.286	0.0778394	51.824	2.10254	1.678	11.8648	0.861	3.03595 ± 0.56870	9.55 ± 1.78	45.11	1.62	0.0015 ± 0.0001
15D00226	18.3 %	0.1471707	1.036	501.9579	0.286	0.0649281	64.179	1.40049	2.729	8.7082	1.183	4.12010 ± 0.94276	12.94 ± 2.95	50.28	0.97	0.0009 ± 0.0001
15D00228	20.2 %	0.1562889	0.971	519.7331	0.286	0.0967877	43.382	1.17125	3.132	8.4977	1.207	3.48326 ± 1.19663	10.95 ± 3.75	33.67	0.75	0.0007 ± 0.0001
15D00229	22.2 %	0.1508778	1.010	509.5321	0.286	0.0890061	46.698	1.05250	3.385	7.4902	1.359	3.74449 ± 1.39132	11.77 ± 4.36	35.47	0.65	0.0006 ± 0.0001
15D00231	24.5 %	0.1413229	1.080	463.5103	0.287	0.0488838	83.932	0.86160	4.193	6.9357	1.481	2.42823 ± 1.75462	7.64 ± 5.51	19.24	0.50	0.0005 ± 0.0001
Σ		2.9989131	0.293	3316.3857	0.107	3.7056087	6.894	111.32503	0.200	1252.6118	0.051					

Information on Analysis and Constants Used in Calculations		Results						
		40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD	39Ar(k) (% <sub>n</sub> )	K/Ca ± 2σ	
Sample = 1180010-2	Age Equations = Min et al. (2000)		5.76063 ± 0.05817 ± 1.01%	18.07 ± 0.20 ± 1.13%	0.96	55.37	0.1998 ± 0.0589	
Material = Groundmass	Negative Intensities = Allowed				50%	18		
Location = Kerguelen Plateau	Decay Constant 40K = 5.530 ± 0.048 E-10 1/a			Full External Error ± 0.46	1.69	2σ Confidence Limit		
Analyst = Anthony Koppers	Decay Constant 39Ar = 2.940 ± 0.016 E-07 1/h			Analytical Error ± 0.18	1.0000	Error Magnification		
Project = KERGUELEN   FALLOON (14-PIL-01)	Decay Constant 37Ar = 8.230 ± 0.012 E-04 1/h							
Mass Discrimination Law = LIN	Decay Constant 36Cl = 2.257 ± 0.015 E-06 1/a							
Irradiation = 14-OSU-06 (6C14-14)	Decay Constant 40K(EC,β <sup>+</sup> ) = 0.580 ± 0.009 E-10 1/a		5.73002 ± 0.05459 ± 0.95%	17.98 ± 0.19 ± 1.08%		38	0.0141 ± 0.0001	
J = 0.00174370 ± 0.00000450	Decay Constant 40K(β <sup>-</sup> ) = 4.950 ± 0.043 E-10 1/a			Full External Error ± 0.45				
FCT-NM = 28.201 ± 0.023 Ma	Atmospheric Ratio 40/36(a) = 295.50			Analytical Error ± 0.17				
IGSN = Undefined	Atmospheric Ratio 38/36(a) = 0.1869							
Preferred Age = Undefined	Production Ratio 39/37(ca) = 0.000673	346.64 ± 93.17	5.57317 ± 0.29580 ± 5.31%	17.49 ± 0.93 ± 5.31%	0.94	55.37		
Classification = Undefined	Production Ratio 38/37(ca) = 0.000014	± 26.88%			52%	18		
Experiment Type = Incremental Heating	Production Ratio 36/37(ca) = 0.000264			Full External Error ± 1.01	1.71	2σ Confidence Limit		
Extraction Method = Undefined	Production Ratio 40/39(k) = 0.001010			Analytical Error ± 0.92	1.0000	Error Magnification		
Heating = 77 sec	Production Ratio 38/39(k) = 0.011380				100	Number of Iterations		
Isolation = 6.00 min	Production Ratio 36/38(cl) = 262.80 ± 1.71				0.0007425016	Convergence		
Instrument = ARGUS-VI-D	Scaling Ratio K/Ca = 0.430							
Lithology = Undefined	Abundance Ratio 40K/K = 1.1700 ± 0.0100 E-04	353.42 ± 97.28	5.58661 ± 0.27586 ± 4.94%	17.53 ± 0.87 ± 4.94%	0.91	55.37		
Lat-Lon = Undefined - Undefined	Atomic Weight K = 39.0983 ± 0.0001 g	± 27.53%			55%	18		
Collector Calibrations = 40Ar 36Ar				Full External Error ± 0.95	1.71	2σ Confidence Limit		
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ArArCALC v2.6.2 -- Beta Version								



OSU Argon Geochronology Lab																																	
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
15D00181	1.9 %	0.9517120	0.40	0.0000000	0.00	0.0008286	5.22	0.0000058	78.15	3.1388	5.22	0.1778750	0.40	0.0000000	0.00	0.0403561	1.00	0.0000436	5.22	0.0537856	78.15	3.54623	1.00	0.0021124	5.22	30.35789	3.75	281.23089	0.40	0.0000000	0.00	0.0035817	1.00
15D00182	2.0 %	0.3732153	0.57	0.0000000	0.00	0.0006511	6.67	0.0000069	63.30	2.4664	6.67	0.0697539	0.57	0.0000000	0.00	0.0391429	1.01	0.0000343	6.67	0.0638513	63.30	3.43962	1.01	0.0016599	6.67	25.87284	2.49	110.28512	0.57	0.0000000	0.00	0.0034740	1.01
15D00184	2.1 %	0.1676683	0.95	0.0000000	0.00	0.0006175	7.23	0.0000070	64.95	2.3391	7.23	0.0313372	0.95	0.0000000	0.00	0.0370175	1.06	0.0000325	7.23	0.0652009	64.96	3.25286	1.06	0.0015742	7.23	22.69130	2.13	49.54598	0.95	0.0000000	0.00	0.0032854	1.06
15D00185	2.2 %	0.0927967	1.53	0.0000000	0.00	0.0006343	7.17	0.0000100	44.75	2.4028	7.17	0.0173437	1.53	0.0000000	0.00	0.0326704	1.28	0.0000334	7.17	0.0924533	44.76	2.87086	1.28	0.0016171	7.17	18.98295	2.27	27.42142	1.53	0.0000000	0.00	0.0028996	1.28
15D00186	2.3 %	0.0585860	2.29	0.0000000	0.00	0.0005958	7.56	0.0000027	164.33	2.2566	7.56	0.0109497	2.29	0.0000000	0.00	0.0329836	1.23	0.0000314	7.56	0.0251615	164.33	2.89839	1.23	0.0015187	7.56	19.32870	2.12	17.31217	2.29	0.0000000	0.00	0.0029274	1.23
15D00188	2.4 %	0.0456026	2.76	0.0000000	0.00	0.0006408	6.85	0.0000016	275.78	2.4274	6.85	0.0085231	2.76	0.0000000	0.00	0.0381262	1.05	0.0000337	6.85	0.0144699	275.78	3.35028	1.05	0.0016336	6.85	20.78012	1.86	13.47557	2.76	0.0000000	0.00	0.0033838	1.05
15D00189	2.5 %	0.0325224	3.89	0.0000000	0.00	0.0005213	8.31	0.0000041	112.47	1.9746	8.31	0.0060784	3.89	0.0000000	0.00	0.0304205	1.36	0.0000274	8.31	0.0378026	112.48	2.67315	1.36	0.0013289	8.31	16.83193	2.30	9.61035	3.89	0.0000000	0.00	0.0026999	1.36
15D00190	2.6 %	0.0239594	5.03	0.0000000	0.00	0.0004963	8.80	0.0000026	182.43	1.8800	8.80	0.0044780	5.03	0.0000000	0.00	0.0300179	1.35	0.0000261	8.80	0.0236481	182.43	2.63778	1.35	0.0012652	8.80	16.18340	2.29	7.08000	5.03	0.0000000	0.00	0.0026642	1.35
15D00192	2.7 %	0.0201067	6.04	0.0000000	0.00	0.0006602	6.54	0.0000042	106.23	2.5006	6.54	0.0037579	6.04	0.0000000	0.00	0.0382274	1.08	0.0000348	6.54	0.0384755	106.24	3.35918	1.08	0.0016829	6.54	20.67622	1.81	5.94154	6.04	0.0000000	0.00	0.0033928	1.08
15D00193	2.8 %	0.0155606	7.68	0.0000000	0.00	0.0004768	9.30	0.0000004	1286.02	1.8059	9.30	0.0029083	7.68	0.0000000	0.00	0.0291482	1.40	0.0000251	9.30	0.0032652	1286.02	2.56136	1.40	0.0012154	9.30	15.87063	2.32	4.59815	7.68	0.0000000	0.00	0.0025870	1.40
15D00194	2.9 %	✓ 0.0147324	8.03	0.0000000	0.00	0.0005358	8.30	0.0000048	93.06	2.0294	8.30	0.0027535	8.03	0.0000000	0.00	0.0320482	1.33	0.0000282	8.30	0.0443775	93.07	2.81618	1.33	0.0013658	8.30	16.54452	2.20	4.35343	8.03	0.0000000	0.00	0.0028443	1.33
15D00196	3.0 %	✓ 0.0134036	9.08	0.0000000	0.00	0.0005251	8.60	0.0000000	#####	1.9889	8.60	0.0025051	9.08	0.0000000	0.00	0.0348403	1.24	0.0000276	8.60	0.0000779	#####	3.06154	1.24	0.0013385	8.60	18.43252	2.03	3.96075	9.08	0.0000000	0.00	0.0030922	1.24
15D00197	3.2 %	✓ 0.0117256	9.78	0.0000000	0.00	0.0005347	8.18	0.0000077	62.38	2.0255	8.18	0.0021915	9.78	0.0000000	0.00	0.0316486	1.29	0.0000282	8.18	0.0708454	62.39	2.78107	1.29	0.0013632	8.18	15.56822	2.27	3.46492	9.78	0.0000000	0.00	0.0028089	1.29
15D00198	3.4 %	✓ 0.0116713	10.25	0.0000000	0.00	0.0006181	7.10	0.0000000	0.00	2.3414	7.10	0.0021814	10.25	0.0000000	0.00	0.0363521	1.09	0.0000325	7.10	0.0000000	0.00	3.19439	1.09	0.0015758	7.10	18.01243	2.04	3.44887	10.25	0.0000000	0.00	0.0032263	1.09
15D00200	3.6 %	✓ 0.0113737	10.38	0.0000000	0.00	0.0006316	7.26	0.0000012	391.15	2.3924	7.26	0.0021257	10.38	0.0000000	0.00	0.0393632	1.02	0.0000333	7.26	0.0110270	391.16	3.45898	1.02	0.0016101	7.26	19.72243	1.84	3.36093	10.38	0.0000000	0.00	0.0034936	1.02
15D00201	3.8 %	✓ 0.0103375	11.18	0.0000000	0.00	0.0006602	6.74	0.0000049	93.39	2.5006	6.74	0.0019321	11.18	0.0000000	0.00	0.0356005	1.21	0.0000348	6.74	0.0454184	93.39	3.12834	1.21	0.0016829	6.74	17.23444	2.07	3.05474	11.18	0.0000000	0.00	0.0031596	1.21
15D00202	4.0 %	✓ 0.0101866	11.42	0.0000000	0.00	0.0006780	6.71	0.0000014	317.74	2.5683	6.71	0.0019039	11.42	0.0000000	0.00	0.0375514	1.04	0.0000357	6.71	0.0126998	317.74	3.29977	1.04	0.0017285	6.71	18.82214	1.91	3.01015	11.42	0.0000000	0.00	0.0033328	1.04
15D00204	4.3 %	✓ 0.0115843	10.24	0.0000000	0.00	0.0008100	5.40	0.0000097	45.81	3.0681	5.40	0.0021651	10.24	0.0000000	0.00	0.0460554	0.90	0.0000426	5.40	0.0894970	45.82	4.04705	0.90	0.0020648	5.40	23.76594	1.54	3.42315	10.24	0.0000000	0.00	0.0040875	0.90
15D00205	4.6 %	✓ 0.0087941	13.13	0.0000000	0.00	0.0007440	5.80	0.0000057	77.85	2.8182	5.80	0.0016436	13.13	0.0000000	0.00	0.0423662	0.94	0.0000392	5.80	0.0524126	77.85	3.72286	0.94	0.0018967	5.80	21.54347	1.66	2.59866	13.13	0.0000000	0.00	0.0037601	0.94
15D00206	4.9 %	✓ 0.0098284	11.65	0.0000000	0.00	0.0007359	6.08	0.0000061	71.03	2.7873	6.08	0.0018369	11.65	0.0000000	0.00	0.0409774	1.03	0.0000387	6.08	0.0565910	71.04	3.60083	1.03	0.0018759	6.08	21.25571	1.66	2.90430	11.65	0.0000000	0.00	0.0036368	1.03
15D00208	5.2 %	✓ 0.0102386	11.53	0.0000000	0.00	0.0008810	4.77	0.0000135	32.65	3.3372	4.77	0.0019136	11.53	0.0000000	0.00	0.0474025	0.88	0.0000464	4.77	0.1247526	32.67	4.16542	0.88	0.0022459	4.77	23.71778	1.53	3.02551	11.53	0.0000000	0.00	0.0042071	0.88
15D00209	5.5 %	✓ 0.0081227	14.29	0.0000000	0.00	0.0007119	6.17	0.0000051	87.24	2.6965	6.17	0.0015181	14.29	0.0000000	0.00	0.0391724	1.04	0.0000375	6.17	0.0472384	87.25	3.44221	1.04	0.0018147	6.17	19.91676	1.80	2.40027	14.29	0.0000000	0.00	0.0034766	1.04
15D00210	5.8 %	✓ 0.0098002	12.14	0.0000000	0.00	0.0007464	5.86	0.0000049	88.72	2.8271	5.86	0.0018317	12.14	0.0000000	0.00	0.0387093	1.02	0.0000393	5.86	0.0450731	88.72	3.40152	1.02	0.0019027	5.86	19.59324	1.87	2.89596	12.14	0.0000000	0.00	0.0034355	1.02
15D00212	6.1 %	✓ 0.0074703	15.74	0.0000000	0.00	0.0007269	6.04	0.0000048	93.33	2.7534	6.04	0.0013962	15.74	0.0000000	0.00	0.0389204	1.05	0.0000383	6.04	0.0439482	93.33	3.42007	1.05	0.0018531	6.04	20.08611	1.80	2.20749	15.74	0.0000000	0.00	0.0034543	1.05
15D00213	6.5 %	✓ 0.0079569	14.60	0.0000000	0.00	0.0007640	5.89	0.0000117	38.70	2.8938	5.89	0.0014871	14.60	0.0000000	0.00	0.0357798	1.20	0.0000402	5.89	0.1083482	38.71	3.14410	1.20	0.0019476	5.89	18.32500	1.96	2.35125	14.60	0.0000000	0.00	0.0031755	1.20
15D00214	7.0 %	✓ 0.0087564	13.15	0.0000000	0.00	0.0009546	4.69	0.0000064	69.64	3.6158	4.69	0.0016366	13.15	0.0000000	0.00	0.0373303	1.09	0.0000503	4.69	0.0593239	69.65	3.28034	1.09	0.0024334	4.69	19.01697	1.87	2.58752	13.15	0.0000000	0.00	0.0033131	1.09
15D00216	7.6 %	✓ 0.0118886	9.93	0.0000000	0.00	0.0013557	3.25	0.0000090	49.96	5.1353	3.25	0.0022220	9.93	0.0000000	0.00	0.0365181	1.14	0.0000714	3.25	0.0834672	49.97	3.20897	1.14	0.0034561	3.25	18.38838	1.98	3.51308	9.93	0.0000000	0.00	0.0032411	1.14
15D00217	8.4 %	✓ 0.0095433	11.79	0.0000000	0.00	0.0024972	1.80	0.0000082	54.40	9.4589	1.80	0.0017836	11.79	0.0000000	0.00	0.0367166	1.11	0.0001315	1.80	0.0756690	54.41	3.22642	1.11	0.0063659	1.80	18.04747	1.93	2.82004	11.79	0.0000000	0.00	0.0032587	1.11
15D00218	9.4 %	0.0101873	11.27	0.0000000	0.00	0.0065521	0.72	0.0000130	33.88	24.8187	0.72	0.0019040	11.27	0.0000000	0.00	0.0359144	1.18	0.0003450	0.72	0.1203284	33.89	3.15592	1.18	0.0167030	0.72	16.66144	2.13	3.01035	11.27	0.0000000	0.00	0.0031875	1.18
15D00220	10.5 %	0.0099327	12.08	0.0000000	0.00	0.0133970	0.44	0.0000061	74.50	50.7460	0.44	0.0018564	12.08	0.0000000	0.00	0.0320029	1.26	0.0007054	0.44	0.0564790	74.51	2.81220	1.26	0.0341521	0.44	13.58830	2.72	2.93512	12.08	0.0000000	0.00		



Additional Parameters		40Ar/39Ar	1σ	37Ar/39Ar	1σ	36Ar/39Ar	1σ	Time (days)	37Ar (decay)	39Ar (decay)	40Ar (moles)
15D00181	1.9 %	87.813569	0.881757	0.884588	0.047009	0.268449	0.002902	66.428	3.723124	1.00046971	1.496E-11
15D00182	2.0 %	39.567051	0.402940	0.716699	0.048346	0.108644	0.001261	66.437	3.723737	1.00046977	6.536E-12
15D00184	2.1 %	22.197581	0.237304	0.718746	0.052530	0.051712	0.000734	66.454	3.725014	1.00046989	3.468E-12
15D00185	2.2 %	16.155827	0.209368	0.836478	0.060918	0.032530	0.000644	66.463	3.725679	1.00046996	2.228E-12
15D00186	2.3 %	12.636201	0.159870	0.778178	0.059582	0.020409	0.000527	66.472	3.726292	1.00047002	1.759E-12
15D00188	2.4 %	10.220757	0.111558	0.724175	0.050214	0.013797	0.000403	66.489	3.727570	1.00047014	1.644E-12
15D00189	2.5 %	9.887890	0.139396	0.738325	0.062184	0.012357	0.000501	66.497	3.728183	1.00047020	1.269E-12
15D00190	2.6 %	8.816107	0.125568	0.712381	0.063428	0.009268	0.000473	66.506	3.728848	1.00047026	1.117E-12
15D00192	2.7 %	7.920933	0.091207	0.744036	0.049339	0.006180	0.000367	66.523	3.730076	1.00047038	1.278E-12
15D00193	2.8 %	7.988600	0.118974	0.704713	0.066270	0.006258	0.000474	66.532	3.730741	1.00047044	9.826E-13
15D00194	2.9 %	✓ 7.418081	0.105323	0.720283	0.060525	0.005421	0.000426	66.540	3.731355	1.00047050	1.003E-12
15D00196	3.0 %	✓ 7.312200	0.096732	0.649364	0.056446	0.004548	0.000401	66.558	3.732635	1.00047062	1.075E-12
15D00197	3.2 %	✓ 6.841471	0.095681	0.727960	0.060318	0.004409	0.000416	66.567	3.733301	1.00047069	9.137E-13
15D00198	3.4 %	✓ 6.716137	0.079697	0.732617	0.052599	0.003845	0.000376	66.575	3.733915	1.00047075	1.030E-12
15D00200	3.6 %	✓ 6.671359	0.073825	0.691334	0.050695	0.003469	0.000343	66.592	3.735196	1.00047087	1.108E-12
15D00201	3.8 %	✓ 6.483127	0.085040	0.798918	0.054744	0.003515	0.000371	66.601	3.735811	1.00047093	9.740E-13
15D00202	4.0 %	✓ 6.613855	0.075636	0.777930	0.052835	0.003291	0.000354	66.610	3.736477	1.00047099	1.048E-12
15D00204	4.3 %	✓ 6.715838	0.065466	0.757710	0.041489	0.003063	0.000294	66.627	3.737759	1.00047111	1.305E-12
15D00205	4.6 %	✓ 6.482539	0.067133	0.756616	0.044452	0.002562	0.000311	66.635	3.738374	1.00047117	1.159E-12
15D00206	4.9 %	✓ 6.707084	0.074595	0.773678	0.047704	0.002934	0.000319	66.644	3.738989	1.00047123	1.160E-12
15D00208	5.2 %	✓ 6.417858	0.061542	0.800729	0.038860	0.002671	0.000284	66.661	3.740272	1.00047135	1.284E-12
15D00209	5.5 %	✓ 6.480928	0.073670	0.782948	0.048968	0.002567	0.000338	66.670	3.740939	1.00047142	1.071E-12
15D00210	5.8 %	✓ 6.608831	0.073912	0.830677	0.049384	0.003100	0.000351	66.678	3.741555	1.00047148	1.080E-12
15D00212	6.1 %	✓ 6.515950	0.074592	0.804647	0.049298	0.002397	0.000344	66.696	3.742838	1.00047160	1.070E-12
15D00213	6.5 %	✓ 6.573151	0.085123	0.919836	0.055304	0.002776	0.000371	66.704	3.743454	1.00047166	9.926E-13
15D00214	7.0 %	✓ 6.582173	0.078224	1.101442	0.052994	0.002960	0.000352	66.713	3.744121	1.00047172	1.037E-12
15D00216	7.6 %	✓ 6.818739	0.084261	1.598578	0.055003	0.004126	0.000370	66.731	3.745406	1.00047184	1.051E-12
15D00217	8.4 %	✓ 6.455974	0.078303	2.925945	0.061816	0.003727	0.000350	66.739	3.746022	1.00047190	1.002E-12
15D00218	9.4 %	6.201476	0.079803	7.822747	0.107905	0.005280	0.000367	66.748	3.746690	1.00047197	9.444E-13
15D00220	10.5 %	5.806113	0.080588	17.828419	0.235001	0.008198	0.000433	66.765	3.747924	1.00047208	7.933E-13
15D00221	11.7 %	4.861883	0.076024	39.374946	0.553555	0.015062	0.000491	66.774	3.748592	1.00047215	6.408E-13
15D00222	13.1 %	4.406717	0.070965	82.882758	1.152579	0.027028	0.000607	66.782	3.749209	1.00047221	5.717E-13
15D00224	14.7 %	4.543454	0.088135	147.750871	2.484896	0.046258	0.000979	66.799	3.750495	1.00047233	4.852E-13
15D00225	16.5 %	5.643098	0.106443	240.079145	4.087578	0.073863	0.001448	66.808	3.751164	1.00047239	5.695E-13
15D00226	18.3 %	6.217963	0.184975	358.415716	9.836410	0.105085	0.003068	66.817	3.751781	1.00047245	4.180E-13
15D00228	20.2 %	7.255234	0.243481	443.741014	13.953816	0.133437	0.004375	66.834	3.753068	1.00047257	4.079E-13
15D00229	22.2 %	7.116610	0.259586	484.116260	16.444788	0.143352	0.005063	66.842	3.753686	1.00047263	3.595E-13
15D00231	24.5 %	8.049860	0.357964	537.966463	22.609745	0.164024	0.007102	66.860	3.754973	1.00047276	3.329E-13



Procedure Blanks		36Ar [fA]	1σ	37Ar [fA]	1σ	38Ar [fA]	1σ	39Ar [fA]	1σ	40Ar [fA]	1σ
15D00181	1.9 %	0.0375698	0.0009554	0.0038612	0.0332442	0.0586526	0.0312086	0.0487989	0.0252248	10.6973592	0.0985150
15D00182	2.0 %	0.0368966	0.0009554	0.0117081	0.0332442	0.0569521	0.0312086	0.0422295	0.0252248	10.5651400	0.0985150
15D00184	2.1 %	0.0356966	0.0009554	0.0245258	0.0332442	0.0528234	0.0312086	0.0310415	0.0252248	10.3230364	0.0985150
15D00185	2.2 %	0.0351702	0.0009554	0.0295008	0.0332442	0.0504926	0.0312086	0.0264418	0.0252248	10.2133057	0.0985150
15D00186	2.3 %	0.0347372	0.0009554	0.0331805	0.0332442	0.0483019	0.0312086	0.0228672	0.0252248	10.1208757	0.0985150
15D00188	2.4 %	0.0339806	0.0009554	0.0383666	0.0332442	0.0438192	0.0312086	0.0172864	0.0252248	9.9528551	0.0985150
15D00189	2.5 %	0.0336792	0.0009554	0.0398160	0.0332442	0.0417930	0.0312086	0.0154109	0.0252248	9.8827456	0.0985150
15D00190	2.6 %	0.0333921	0.0009554	0.0407323	0.0332442	0.0397479	0.0312086	0.0139001	0.0252248	9.8136325	0.0985150
15D00192	2.7 %	0.0329556	0.0009554	0.0409091	0.0332442	0.0365180	0.0312086	0.0123626	0.0252248	9.7025366	0.0985150
15D00193	2.8 %	0.0327624	0.0009554	0.0403271	0.0332442	0.0351297	0.0312086	0.0121161	0.0252248	9.6501595	0.0985150
15D00194	2.9 %	0.0326068	0.0009554	0.0394498	0.0332442	0.0341077	0.0312086	0.0122002	0.0252248	9.6060263	0.0985150
15D00196	3.0 %	0.0323402	0.0009554	0.0368174	0.0332442	0.0328657	0.0312086	0.0131739	0.0252248	9.5252023	0.0985150
15D00197	3.2 %	0.0322263	0.0009554	0.0351412	0.0332442	0.0327300	0.0312086	0.0140236	0.0252248	9.4881871	0.0985150
15D00198	3.4 %	0.0321328	0.0009554	0.0334769	0.0332442	0.0329308	0.0312086	0.0149680	0.0252248	9.4565474	0.0985150
15D00200	3.6 %	0.0319642	0.0009554	0.0298467	0.0332442	0.0343830	0.0312086	0.0172876	0.0252248	9.3970053	0.0985150
15D00201	3.8 %	0.0318920	0.0009554	0.0281124	0.0332442	0.0355810	0.0312086	0.0185063	0.0252248	9.3708823	0.0985150
15D00202	4.0 %	0.0318173	0.0009554	0.0262991	0.0332442	0.0372430	0.0312086	0.0198586	0.0252248	9.3439805	0.0985150
15D00204	4.3 %	0.0316776	0.0009554	0.0231603	0.0332442	0.0414727	0.0312086	0.0224282	0.0252248	9.2953383	0.0985150
15D00205	4.6 %	0.0316097	0.0009554	0.0218828	0.0332442	0.0439632	0.0312086	0.0235923	0.0252248	9.2730376	0.0985150
15D00206	4.9 %	0.0315398	0.0009554	0.0207917	0.0332442	0.0467321	0.0312086	0.0246783	0.0252248	9.2512069	0.0985150
15D00208	5.2 %	0.0313839	0.0009554	0.0192225	0.0332442	0.0533098	0.0312086	0.0265921	0.0252248	9.2067268	0.0985150
15D00209	5.5 %	0.0312960	0.0009554	0.0188321	0.0332442	0.0571060	0.0312086	0.0273508	0.0252248	9.1839298	0.0985150
15D00210	5.8 %	0.0312100	0.0009554	0.0187558	0.0332442	0.0607984	0.0312086	0.0278791	0.0252248	9.1630116	0.0985150
15D00212	6.1 %	0.0310153	0.0009554	0.0195343	0.0332442	0.0689261	0.0312086	0.0283695	0.0252248	9.1197514	0.0985150
15D00213	6.5 %	0.0309145	0.0009554	0.0203803	0.0332442	0.0729595	0.0312086	0.0282775	0.0252248	9.0991749	0.0985150
15D00214	7.0 %	0.0308001	0.0009554	0.0216544	0.0332442	0.0773620	0.0312086	0.0279147	0.0252248	9.0770972	0.0985150
15D00216	7.6 %	0.0305675	0.0009554	0.0251664	0.0332442	0.0857163	0.0312086	0.0263869	0.0252248	9.0356611	0.0985150
15D00217	8.4 %	0.0304513	0.0009554	0.0273494	0.0332442	0.0895678	0.0312086	0.0252404	0.0252248	9.0165018	0.0985150
15D00218	9.4 %	0.0303235	0.0009554	0.0300741	0.0332442	0.0935401	0.0312086	0.0236796	0.0252248	8.9965157	0.0985150
15D00220	10.5 %	0.0300869	0.0009554	0.0360597	0.0332442	0.1000809	0.0312086	0.0198910	0.0252248	8.9625104	0.0985150
15D00221	11.7 %	0.0299614	0.0009554	0.0397969	0.0332442	0.1030494	0.0312086	0.0173308	0.0252248	8.9461667	0.0985150
15D00222	13.1 %	0.0298495	0.0009554	0.0435370	0.0332442	0.1053369	0.0312086	0.0146426	0.0252248	8.9327311	0.0985150
15D00224	14.7 %	0.0296359	0.0009554	0.0521503	0.0332442	0.1083878	0.0312086	0.0080219	0.0252248	8.9111186	0.0985150
15D00225	16.5 %	0.0295400	0.0009554	0.0570205	0.0332442	0.1088786	0.0312086	0.0040282	0.0252248	8.9040511	0.0985150
15D00226	18.3 %	0.0294638	0.0009554	0.0617202	0.0332442	0.1085512	0.0312086	0.0000054	0.0252248	8.9005705	0.0985150
15D00228	20.2 %	0.0293539	0.0009554	0.0720209	0.0332442	0.1050854	0.0312086	0.0094093	0.0252248	8.9044453	0.0985150
15D00229	22.2 %	0.0293301	0.0009554	0.0771467	0.0332442	0.1019000	0.0312086	0.0144204	0.0252248	8.9125321	0.0985150
15D00231	24.5 %	0.0293563	0.0009554	0.0880163	0.0332442	0.0915766	0.0312086	0.0258644	0.0252248	8.9448973	0.0985150



OSU Argon Geochronology Lab																									
Intercept Values	36Ar					37Ar					38Ar					39Ar					40Ar				
		[fA]	1σ	r2			[fA]	1σ	r2			[fA]	1σ	r2			[fA]	1σ	r2			[fA]	1σ	r2	
15D00181	1.9 %	0.9314940	0.0021395	0.8369	EXP 150 of 150		0.8307	0.0274	0.0757	EXP 150 of 150		0.2099038	0.0273209	0.0011	EXP 150 of 150		3.57267	0.02466	0.0987	EXP 150 of 150		323.22480	0.05824	0.9922	EXP 150 of 150
15D00182	2.0 %	0.3877607	0.0013708	0.4478	EXP 150 of 150		0.6613	0.0277	0.0045	EXP 150 of 150		0.1136050	0.0248383	0.0003	EXP 150 of 150		3.45979	0.02358	0.0717	EXP 150 of 150		147.13520	0.10750	0.7920	EXP 150 of 150
15D00184	2.1 %	0.1936323	0.0010355	0.0045	EXP 150 of 150		0.6404	0.0296	0.0092	EXP 150 of 150		0.0790443	0.0278024	0.0016	EXP 150 of 150		3.26304	0.02300	0.1276	EXP 150 of 150		82.78039	0.04477	0.9879	EXP 150 of 150
15D00185	2.2 %	0.1228606	0.0008786	0.2858	EXP 150 of 150		0.6620	0.0308	0.0334	EXP 150 of 150		0.0901729	0.0263223	0.0036	EXP 150 of 150		2.87911	0.02616	0.1316	EXP 150 of 150		56.75984	0.03828	0.9941	EXP 150 of 150
15D00186	2.3 %	0.0902793	0.0008001	0.4937	EXP 150 of 150		0.6271	0.0301	0.0108	EXP 150 of 150		0.0199340	0.0262957	0.0078	EXP 150 of 150		2.90278	0.02492	0.1206	EXP 149 of 150		46.87464	0.03317	0.9958	EXP 150 of 150
15D00188	2.4 %	0.0773796	0.0006781	0.5006	EXP 150 of 150		0.6770	0.0284	0.0328	EXP 150 of 150		0.0165461	0.0240288	0.0114	EXP 150 of 150		3.34609	0.02403	0.2814	EXP 150 of 150		44.31474	0.03236	0.9951	EXP 150 of 150
15D00189	2.5 %	0.0646931	0.0006933	0.5304	EXP 150 of 150		0.5592	0.0275	0.0173	EXP 150 of 150		0.0315787	0.0280557	0.0000	EXP 150 of 150		2.67145	0.02559	0.0981	EXP 150 of 150		36.40709	0.03169	0.9957	EXP 150 of 150
15D00190	2.6 %	0.0563451	0.0005948	0.6044	EXP 150 of 150		0.5352	0.0280	0.0093	EXP 150 of 150		0.0176730	0.0289691	0.0014	EXP 150 of 150		2.63474	0.02490	0.2257	EXP 150 of 150		33.14952	0.03022	0.9961	EXP 150 of 150
15D00192	2.7 %	0.0524483	0.0006128	0.6393	EXP 150 of 150		0.6984	0.0272	0.0254	EXP 149 of 150		0.0429409	0.0255635	0.0060	EXP 150 of 150		3.35005	0.02578	0.1555	EXP 150 of 150		36.40358	0.03510	0.9935	EXP 150 of 150
15D00193	2.8 %	0.0478131	0.0005814	0.6279	EXP 150 of 150		0.5150	0.0290	0.0003	EXP 149 of 150		0.0002381	0.0272738	0.0014	EXP 149 of 150		2.55702	0.02516	0.0216	EXP 150 of 150		30.18296	0.03131	0.9952	EXP 150 of 150
15D00194	2.9 %	0.0469398	0.0005603	0.5953	EXP 150 of 150		0.5728	0.0292	0.0451	EXP 150 of 150		0.0440794	0.0262213	0.0022	EXP 150 of 150		2.81032	0.02741	0.1861	EXP 150 of 150		30.56955	0.02799	0.9960	EXP 149 of 150
15D00196	3.0 %	0.0454117	0.0006212	0.6128	EXP 150 of 150		0.5594	0.0302	0.0001	EXP 150 of 150		0.0041029	0.0264688	0.0029	EXP 150 of 150		3.05493	0.02797	0.2219	EXP 150 of 150		31.98878	0.03119	0.9941	EXP 150 of 150
15D00197	3.2 %	0.0437393	0.0004886	0.6281	EXP 150 of 150		0.5672	0.0281	0.0260	EXP 150 of 150		0.0706350	0.0304717	0.0482	EXP 150 of 150		2.77727	0.02509	0.2547	EXP 150 of 150		28.58127	0.03145	0.9944	EXP 150 of 150
15D00198	3.4 %	0.0436659	0.0005847	0.5399	EXP 150 of 150		0.6484	0.0282	0.0107	EXP 150 of 150		0.0072279	0.0266472	0.0118	EXP 150 of 150		3.18889	0.02343	0.3057	EXP 150 of 150		30.98549	0.02832	0.9951	EXP 150 of 150
15D00200	3.6 %	0.0432318	0.0005547	0.5589	EXP 150 of 150		0.6580	0.0312	0.0008	EXP 150 of 150		0.0174895	0.0289577	0.0035	EXP 150 of 150		3.45402	0.02397	0.2731	EXP 150 of 150		32.55315	0.02686	0.9951	EXP 150 of 150
15D00201	3.8 %	0.0422175	0.0005076	0.5681	EXP 150 of 150		0.6846	0.0292	0.0589	EXP 149 of 150		0.0463359	0.0279012	0.0007	EXP 150 of 150		3.12695	0.02781	0.2899	EXP 150 of 150		29.72412	0.03051	0.9939	EXP 150 of 150
15D00202	4.0 %	0.0420146	0.0005228	0.6016	EXP 150 of 150		0.7004	0.0306	0.0144	EXP 150 of 150		0.0142757	0.0247458	0.0074	EXP 150 of 150		3.29859	0.02291	0.2617	EXP 149 of 150		31.24513	0.03118	0.9935	EXP 150 of 150
15D00204	4.3 %	0.0433182	0.0005656	0.5752	EXP 150 of 150		0.8281	0.0279	0.0166	EXP 149 of 150		0.0945133	0.0257505	0.0084	EXP 150 of 150		4.04362	0.02577	0.3133	EXP 150 of 150		36.57013	0.02831	0.9934	EXP 150 of 150
15D00205	4.6 %	0.0405662	0.0005059	0.6268	EXP 150 of 150		0.7612	0.0270	0.0153	EXP 149 of 150		0.0512560	0.0254486	0.0015	EXP 150 of 150		3.72266	0.02394	0.4121	EXP 150 of 150		33.49139	0.03281	0.9917	EXP 150 of 150
15D00206	4.9 %	0.0414596	0.0004857	0.6082	EXP 150 of 150		0.7519	0.0294	0.0226	EXP 150 of 150		0.0514312	0.0244959	0.0019	EXP 150 of 150		3.60254	0.02663	0.2203	EXP 150 of 150		33.48736	0.03027	0.9927	EXP 150 of 150
15D00208	5.2 %	0.0418319	0.0005549	0.5367	EXP 150 of 150		0.8942	0.0252	0.0147	EXP 150 of 150		0.1185628	0.0253250	0.0014	EXP 149 of 150		4.16552	0.02604	0.4613	EXP 149 of 150		36.03449	0.03013	0.9919	EXP 150 of 150
15D00209	5.5 %	0.0395917	0.0005176	0.5632	EXP 150 of 150		0.7257	0.0281	0.0058	EXP 150 of 150		0.0297274	0.0260860	0.0028	EXP 150 of 150		3.44763	0.02497	0.2961	EXP 149 of 150		31.57142	0.02895	0.9932	EXP 150 of 150
15D00210	5.8 %	0.0411121	0.0005732	0.5038	EXP 150 of 150		0.7598	0.0278	0.0106	EXP 150 of 150		0.0237517	0.0241598	0.0065	EXP 150 of 150		3.40783	0.02340	0.2732	EXP 148 of 150		31.72315	0.03093	0.9920	EXP 150 of 150
15D00212	6.1 %	0.0387126	0.0005473	0.4976	EXP 150 of 150		0.7410	0.0281	0.0072	EXP 150 of 150		0.0142911	0.0257854	0.0045	EXP 150 of 150		3.42669	0.02509	0.3466	EXP 150 of 150		31.48372	0.02775	0.9933	EXP 150 of 150
15D00213	6.5 %	0.0391096	0.0005208	0.5515	EXP 150 of 150		0.7785	0.0298	0.0118	EXP 150 of 150		0.0708199	0.0271684	0.0180	EXP 150 of 150		3.15263	0.02747	0.1895	EXP 150 of 150		29.84066	0.03070	0.9924	EXP 150 of 150
15D00214	7.0 %	0.0399195	0.0005003	0.6118	EXP 150 of 150		0.9687	0.0293	0.0349	EXP 149 of 150		0.0197124	0.0262411	0.0057	EXP 150 of 150		3.28805	0.02487	0.2487	EXP 150 of 150		30.74974	0.03099	0.9918	EXP 150 of 150
15D00216	7.6 %	0.0430052	0.0005556	0.4984	EXP 150 of 150		1.3698	0.0280	0.1615	EXP 150 of 150		0.0349874	0.0268233	0.0005	EXP 150 of 150		3.21666	0.02618	0.2089	EXP 150 of 150		31.00609	0.03282	0.9903	EXP 150 of 150
15D00217	8.4 %	0.0417584	0.0004435	0.5535	EXP 150 of 150		2.5037	0.0288	0.1612	EXP 150 of 150		0.0232608	0.0260077	0.0047	EXP 150 of 150		3.23573	0.02500	0.2027	EXP 150 of 150		29.94991	0.03038	0.9921	EXP 150 of 150
15D00218	9.4 %	0.0460450	0.0004911	0.5677	EXP 149 of 150		6.5264	0.0274	0.6894	EXP 150 of 150		0.0629104	0.0253761	0.0078	EXP 150 of 150		3.17443	0.02703	0.1847	EXP 150 of 150		28.73053	0.03103	0.9924	EXP 150 of 150
15D00220	10.5 %	0.0519865	0.0005868	0.4352	EXP 150 of 150		13.3146	0.0308	0.8502	EXP 149 of 150		0.0102098	0.0274011	0.0038	EXP 150 of 150		2.84662	0.02431	0.1320	EXP 149 of 150		25.53837	0.02999	0.9929	EXP 150 of 150
15D00221	11.7 %	0.0687767	0.0006223	0.1448	EXP 150 of 150		28.3266	0.0332	0.9595	EXP 150 of 150		0.0085014	0.0281074	0.0045	EXP 150 of 150		2.74434	0.02738	0.2063	EXP 150 of 150		22.33673	0.02515	0.9957	EXP 150 of 150
15D00222	13.1 %	0.0984071	0.0007340	0.1443	EXP 149 of 150		58.6424	0.0380	0.9870	EXP 150 of 150		0.0335656	0.0243603	0.0096	EXP 150 of 150		2.69887	0.02627	0.1761	EXP 150 of 150		20.87928	0.03097	0.9941	EXP 150 of 150
15D00224	14.7 %	0.1262235	0.0007798	0.0007	EXP 150 of 150		86.0129	0.0347	0.9950	EXP 150 of 150		0.0480117	0.0260752	0.0283	EXP 150 of 150		2.21762	0.02649	0.1185	EXP 150 of 150		19.05040	0.02755	0.9956	EXP 150 of 150
15D00225	16.5 %	0.1752828	0.0010315	0.1543	EXP 150 of 150		132.0258	0.0386	0.9973	EXP 150 of 150		0.0320418	0.0247311	0.0174	EXP 150 of 150		2.09206	0.02428	0.0745	EXP 149 of 150		2			



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ArArCALC v2.6.2 -- Beta Version

Sample Parameters		Sample	Material	Location	Analyst	Temp	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	Irradiation	X-pos	Y-pos	Z/H-pos
15D00181	1.9 %	1180010-2	Groundmass	Kerguelen Plateau	Anthony Koppers	1.9	FCT-NM (6C14-14)	28.201	0.082	Kuiper et al (2008)	9.01382	0.258	0.00174370	0.258	303.304	0.156	0.993559196	0.070	1	4.8E-14	2	JAN	2015	22	32	1	14-OSU-06	0.00	0.00	46.86
15D00182	2.0 %	1180010-2	Groundmass	Kerguelen Plateau	Anthony Koppers	2	FCT-NM (6C14-14)	28.201	0.082	Kuiper et al (2008)	9.01382	0.258	0.00174370	0.258	303.304	0.156	0.993559196	0.070	1	4.8E-14	2	JAN	2015	22	44	1	14-OSU-06	0.00	0.00	46.86
15D00184	2.1 %	1180010-2	Groundmass	Kerguelen Plateau	Anthony Koppers	2.1	FCT-NM (6C14-14)	28.201	0.082	Kuiper et al (2008)	9.01382	0.258	0.00174370	0.258	303.304	0.156	0.993559196	0.070	1	4.8E-14	2	JAN	2015	23	9	1	14-OSU-06	0.00	0.00	46.86
15D00185	2.2 %	1180010-2	Groundmass	Kerguelen Plateau	Anthony Koppers	2.2	FCT-NM (6C14-14)	28.201	0.082	Kuiper et al (2008)	9.01382	0.258	0.00174370	0.258	303.304	0.156	0.993559196	0.070	1	4.8E-14	2	JAN	2015	23	22	1	14-OSU-06	0.00	0.00	46.86
15D00186	2.3 %	1180010-2	Groundmass	Kerguelen Plateau	Anthony Koppers	2.3	FCT-NM (6C14-14)	28.201	0.082	Kuiper et al (2008)	9.01382	0.258	0.00174370	0.258	303.304	0.156	0.993559196	0.070	1	4.8E-14	2	JAN	2015	23	34	1	14-OSU-06	0.00	0.00	46.86
15D00188	2.4 %	1180010-2	Groundmass	Kerguelen Plateau	Anthony Koppers	2.4	FCT-NM (6C14-14)	28.201	0.082	Kuiper et al (2008)	9.01382	0.258	0.00174370	0.258	303.304	0.156	0.993559196	0.070	1	4.8E-14	2	JAN	2015	23	59	1	14-OSU-06	0.00	0.00	46.86
15D00189	2.5 %	1180010-2	Groundmass	Kerguelen Plateau	Anthony Koppers	2.5	FCT-NM (6C14-14)	28.201	0.082	Kuiper et al (2008)	9.01382	0.258	0.00174370	0.258	303.304	0.156	0.993559196	0.070	1	4.8E-14	3	JAN	2015	0	11	1	14-OSU-06	0.00	0.00	46.86
15D00190	2.6 %	1180010-2	Groundmass	Kerguelen Plateau	Anthony Koppers	2.6	FCT-NM (6C14-14)	28.201	0.082	Kuiper et al (2008)	9.01382	0.258	0.00174370	0.258	303.304	0.156	0.993559196	0.070	1	4.8E-14	3	JAN	2015	0	24	1	14-OSU-06	0.00	0.00	46.86
15D00192	2.7 %	1180010-2	Groundmass	Kerguelen Plateau	Anthony Koppers	2.7	FCT-NM (6C14-14)	28.201	0.082	Kuiper et al (2008)	9.01382	0.258	0.00174370	0.258	303.304	0.156	0.993559196	0.070	1	4.8E-14	3	JAN	2015	0	48	1	14-OSU-06	0.00	0.00	46.86
15D00193	2.8 %	1180010-2	Groundmass	Kerguelen Plateau	Anthony Koppers	2.8	FCT-NM (6C14-14)	28.201	0.082	Kuiper et al (2008)	9.01382	0.258	0.00174370	0.258	303.304	0.156	0.993559196	0.070	1	4.8E-14	3	JAN	2015	1	1	1	14-OSU-06	0.00	0.00	46.86
15D00194	2.9 %	1180010-2	Groundmass	Kerguelen Plateau	Anthony Koppers	2.9	FCT-NM (6C14-14)	28.201	0.082	Kuiper et al (2008)	9.01382	0.258	0.00174370	0.258	303.304	0.156	0.993559196	0.070	1	4.8E-14	3	JAN	2015	1	13	1	14-OSU-06	0.00	0.00	46.86
15D00196	3.0 %	1180010-2	Groundmass	Kerguelen Plateau	Anthony Koppers	3	FCT-NM (6C14-14)	28.201	0.082	Kuiper et al (2008)	9.01382	0.258	0.00174370	0.258	303.304	0.156	0.993559196	0.070	1	4.8E-14	3	JAN	2015	1	38	1	14-OSU-06	0.00	0.00	46.86
15D00197	3.2 %	1180010-2	Groundmass	Kerguelen Plateau	Anthony Koppers	3.2	FCT-NM (6C14-14)	28.201	0.082	Kuiper et al (2008)	9.01382	0.258	0.00174370	0.258	303.304	0.156	0.993559196	0.070	1	4.8E-14	3	JAN	2015	1	51	1	14-OSU-06	0.00	0.00	46.86
15D00198	3.4 %	1180010-2	Groundmass	Kerguelen Plateau	Anthony Koppers	3.4	FCT-NM (6C14-14)	28.201	0.082	Kuiper et al (2008)	9.01382	0.258	0.00174370	0.258	303.304	0.156	0.993559196	0.070	1	4.8E-14	3	JAN	2015	2	3	1	14-OSU-06	0.00	0.00	46.86
15D00200	3.6 %	1180010-2	Groundmass	Kerguelen Plateau	Anthony Koppers	3.6	FCT-NM (6C14-14)	28.201	0.082	Kuiper et al (2008)	9.01382	0.258	0.00174370	0.258	303.304	0.156	0.993559196	0.070	1	4.8E-14	3	JAN	2015	2	28	1	14-OSU-06	0.00	0.00	46.86
15D00201	3.8 %	1180010-2	Groundmass	Kerguelen Plateau	Anthony Koppers	3.8	FCT-NM (6C14-14)	28.201	0.082	Kuiper et al (2008)	9.01382	0.258	0.00174370	0.258	303.304	0.156	0.993559196	0.070	1	4.8E-14	3	JAN	2015	2	40	1	14-OSU-06	0.00	0.00	46.86
15D00202	4.0 %	1180010-2	Groundmass	Kerguelen Plateau	Anthony Koppers	4	FCT-NM (6C14-14)	28.201	0.082	Kuiper et al (2008)	9.01382	0.258	0.00174370	0.258	303.304	0.156	0.993559196	0.070	1	4.8E-14	3	JAN	2015	2	53	1	14-OSU-06	0.00	0.00	46.86
15D00204	4.3 %	1180010-2	Groundmass	Kerguelen Plateau	Anthony Koppers	4.3	FCT-NM (6C14-14)	28.201	0.082	Kuiper et al (2008)	9.01382	0.258	0.00174370	0.258	303.304	0.156	0.993559196	0.070	1	4.8E-14	3	JAN	2015	3	18	1	14-OSU-06	0.00	0.00	46.86
15D00205	4.6 %	1180010-2	Groundmass	Kerguelen Plateau	Anthony Koppers	4.6	FCT-NM (6C14-14)	28.201	0.082	Kuiper et al (2008)	9.01382	0.258	0.00174370	0.258	303.304	0.156	0.993559196	0.070	1	4.8E-14	3	JAN	2015	3	30	1	14-OSU-06	0.00	0.00	46.86
15D00206	4.9 %	1180010-2	Groundmass	Kerguelen Plateau	Anthony Koppers	4.9	FCT-NM (6C14-14)	28.201	0.082	Kuiper et al (2008)	9.01382	0.258	0.00174370	0.258	303.304	0.156	0.993559196	0.070	1	4.8E-14	3	JAN	2015	3	42	1	14-OSU-06	0.00	0.00	46.86
15D00208	5.2 %	1180010-2	Groundmass	Kerguelen Plateau	Anthony Koppers	5.2	FCT-NM (6C14-14)	28.201	0.082	Kuiper et al (2008)	9.01382	0.258	0.00174370	0.258	303.304	0.156	0.993559196	0.070	1	4.8E-14	3	JAN	2015	4	7	1	14-OSU-06	0.00	0.00	46.86
15D00209	5.5 %	1180010-2	Groundmass	Kerguelen Plateau	Anthony Koppers	5.5	FCT-NM (6C14-14)	28.201	0.082	Kuiper et al (2008)	9.01382	0.258	0.00174370	0.258	303.304	0.156	0.993559196	0.070	1	4.8E-14	3	JAN	2015	4	20	1	14-OSU-06	0.00	0.00	46.86
15D00210	5.8 %	1180010-2	Groundmass	Kerguelen Plateau	Anthony Koppers	5.8	FCT-NM (6C14-14)	28.201	0.082	Kuiper et al (2008)	9.01382	0.258	0.00174370	0.258	303.304	0.156	0.993559196	0.070	1	4.8E-14	3	JAN	2015	4	32	1	14-OSU-06	0.00	0.00	46.86
15D00212	6.1 %	1180010-2	Groundmass	Kerguelen Plateau	Anthony Koppers	6.1	FCT-NM (6C14-14)	28.201	0.082	Kuiper et al (2008)	9.01382	0.258	0.00174370	0.258	303.304	0.156	0.993559196	0.070	1	4.8E-14	3	JAN	2015	4	57	1	14-OSU-06	0.00	0.00	46.86
15D00213	6.5 %	1180010-2	Groundmass	Kerguelen Plateau	Anthony Koppers	6.5	FCT-NM (6C14-14)	28.201	0.082	Kuiper et al (2008)	9.01382	0.258	0.00174370	0.258	303.304	0.156	0.993559196	0.070	1	4.8E-14	3	JAN	2015	5	9	1	14-OSU-06	0.00	0.00	46.86
15D00214	7.0 %	1180010-2	Groundmass	Kerguelen Plateau	Anthony Koppers	7	FCT-NM (6C14-14)	28.201	0.082	Kuiper et al (2008)	9.01382	0.258	0.00174370	0.258	303.304	0.156	0.993559196	0.070	1	4.8E-14	3	JAN	2015	5	22	1	14-OSU-06	0.00	0.00	46.86
15D00216	7.6 %	1180010-2	Groundmass	Kerguelen Plateau	Anthony Koppers	7.6	FCT-NM (6C14-14)	28.201	0.082	Kuiper et al (2008)	9.01382	0.258	0.00174370	0.258	303.304	0.156	0.993559196	0.070	1	4.8E-14	3	JAN	2015	5	47	1	14-OSU-06	0.00	0.00	46.86
15D00217	8.4 %	1180010-2	Groundmass	Kerguelen Plateau	Anthony Koppers	8.4	FCT-NM (6C14-14)	28.201	0.082	Kuiper et al (2008)	9.01382	0.258	0.00174370	0.258	303.304	0.156	0.993559196	0.070	1	4.8E-14	3	JAN	2015	5	59	1	14-OSU-06	0.00	0.00	46.86
15D00218	9.4 %	1180010-2	Groundmass	Kerguelen Plateau	Anthony Koppers	9.4	FCT-NM (6C14-14)	28.201	0.082	Kuiper et al (2008)	9.01382	0.258	0.00174370	0.258	303.304	0.156	0.993559196	0.070	1	4.8E-14	3	JAN	2015	6	12	1	14-OSU-06	0.00	0.00	46.86
15D00220	10.5 %	1180010-2	Groundmass	Kerguelen Plateau	Anthony Koppers	10.5	FCT-NM (6C14-14)	28.201	0.082	Kuiper et al (2008)	9.01382	0.258	0.00174370	0.258	303.304	0.156	0.993559196	0.070	1	4.8E-14	3	JAN	2015	6	36	1	14-OSU-06	0.00	0.00	46.86
15D00221	11.7 %	1180010-2	Groundmass	Kerguelen Plateau	Anthony Koppers	11.7	FCT-NM (6C14-14)	28.201	0.082	Kuiper et al (2008)	9.01382	0.258	0.00174370	0.258	303.304	0.156	0.993559196	0.070	1	4.8E-14	3	JAN	2015	6	49	1	14-OSU-06	0.00	0.00	46.86
15D00222	13.1 %	1180010-2	Groundmass	Kerguelen Plateau	Anthony Koppers	13.1	FCT-NM (6C14-14)	28.201	0.082	Kuiper et al (2008)	9.01382	0.258	0.00174370	0.258	303.304	0.156	0.993559196	0.070	1	4.8E-14	3	JAN	2015	7	1	1	14-OSU-06	0.00	0.00	46.86
15D00224	14.7 %	1180010-2	Groundmass	Kerguelen Plateau	Anthony Koppers	14.7	FCT-NM (6C14-14)	28.201	0.082	Kuiper et al (2008)	9.01382	0.258	0.00174370	0.258	303.304	0.156	0.993559196	0.070	1	4.8E-14	3	JAN	2015	7	26	1	14-OSU-06	0.00	0.00	46.86
15D00225	16.5 %	1180010-2	Groundmass	Kerguelen Plateau	Anthony Koppers	16.5	FCT-NM (6C14-14)	28.201	0.082	Kuiper et al (2008)	9.01382	0.258	0.00174370	0.258	303.304	0.156	0.993559196	0.070	1	4.8E-14	3	JAN	2015	7	39	1	14-OSU-06	0.00	0.00	46.86
15D00226	18.3 %	1180010-2	Groundmass	Kerguelen Plateau	Anthony Koppers	18.3	FCT-NM (6C14-14)	28.201	0.082	Kuiper et al (2008)	9.01382	0.258	0.00174370	0.258	303.304	0.156	0.993559196	0.070	1	4.8E-14	3	JAN	2015	7	51	1	14-OSU-06	0.00	0.00	46.86
15D00228	20.2 %	1180010-2	Groundmass	Kerguelen Plateau	Anthony Koppers	20.2	FCT-NM (6C14-14)	28.201	0.082	Kuiper et al (2008)	9.01382	0.258	0.00174370	0.258	303.304	0.156	0.993559196	0.070	1	4.8E-14	3	JAN	2015	8	16	1	14-OSU-06	0.00	0.00	46.86
15D00229	22.2 %	1180010-2	Groundmass	Kerguelen Plateau	Anthony Koppers	22.2	FCT-NM (6C14-14)	28.201	0.082	Kuiper et al (2008)	9.01382	0.258	0.00174370	0.258	303.304	0.156	0.993559196	0.070	1	4.8E-14	3	JAN	2015	8	28	1	14-OSU-06	0.00	0.00	46.86
15D00231	24.5 %	1180010-2	Groundmass	Kerguelen Plateau	Anthony Koppers	24.5	FCT-NM (6C14-14)	28.201	0.082	Kuiper et al (2008)	9.01382	0.258	0.00174370	0.258	303.304	0.156	0.993559196	0.070	1	4.8E-14	3	JAN	2015	8	53	1	14-OSU-06	0.00	0.00	46.86



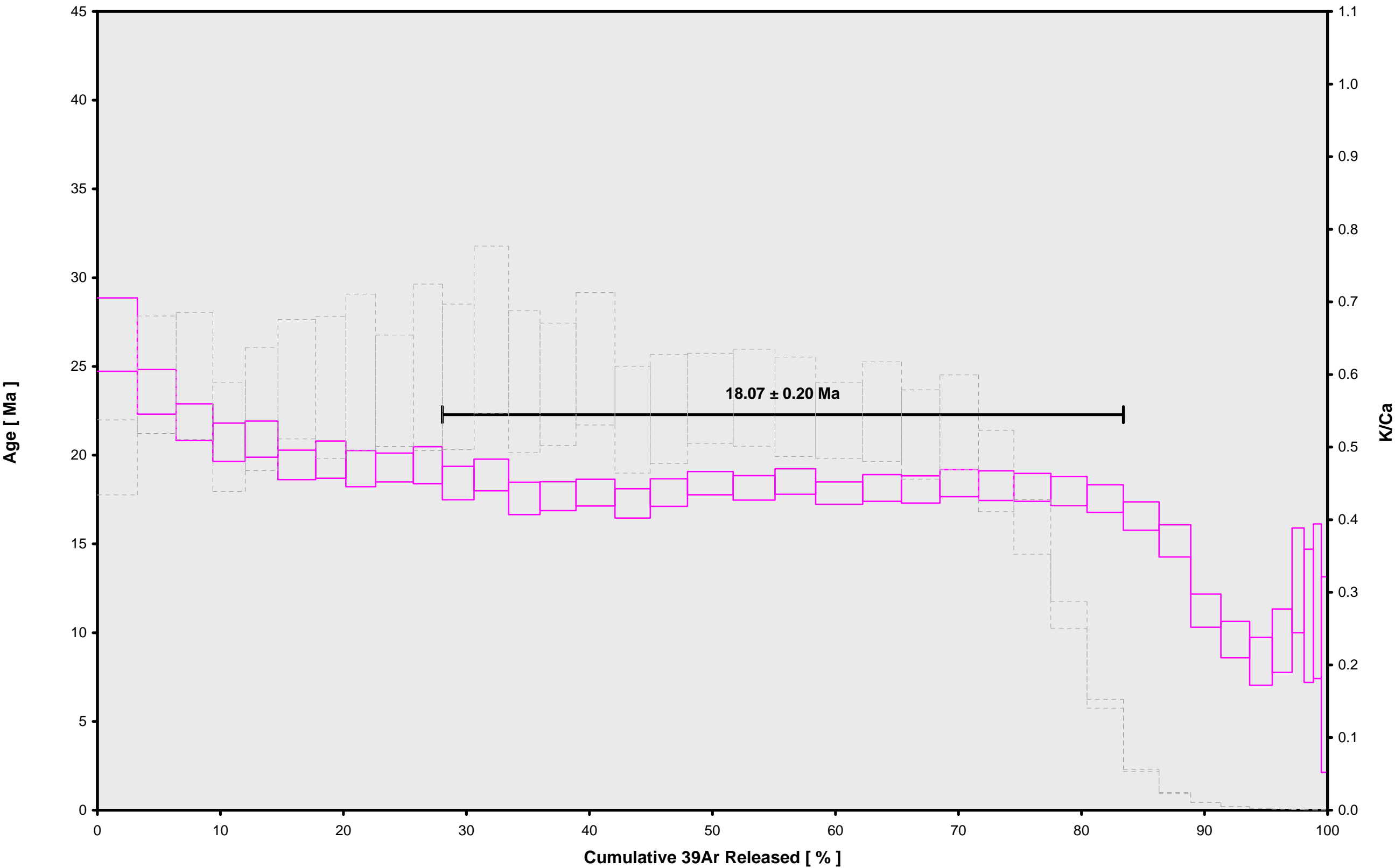
[illegible]



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
15D00181	1.9 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15D00182	2.0 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15D00184	2.1 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15D00185	2.2 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15D00186	2.3 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15D00188	2.4 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15D00189	2.5 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15D00190	2.6 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15D00192	2.7 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15D00193	2.8 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15D00194	2.9 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15D00196	3.0 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15D00197	3.2 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15D00198	3.4 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15D00200	3.6 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15D00201	3.8 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15D00202	4.0 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15D00204	4.3 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15D00205	4.6 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15D00206	4.9 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15D00208	5.2 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15D00209	5.5 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15D00210	5.8 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15D00212	6.1 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15D00213	6.5 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15D00214	7.0 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15D00216	7.6 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15D00217	8.4 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15D00218	9.4 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15D00220	10.5 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15D00221	11.7 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15D00222	13.1 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15D00224	14.7 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15D00225	16.5 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15D00226	18.3 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15D00228	20.2 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15D00229	22.2 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15D00231	24.5 %	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.0000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0	0	0	0	0	0	0	0	0	0



15D00180.AGE >>> 1180010-2 >>> KERGUELEN | FALLOON (14-PIL-01) PROJECT



Ar-Ages in Ma

WEIGHTED PLATEAU

18.07 ± 0.20

TOTAL FUSION

17.98 ± 0.19

NORMAL ISOCHRON

17.49 ± 0.93

INVERSE ISOCHRON

17.53 ± 0.87

MSWD (PROBABILITY)

0.96 (50%)

Sample Info

Groundmass

Kerguelen Plateau

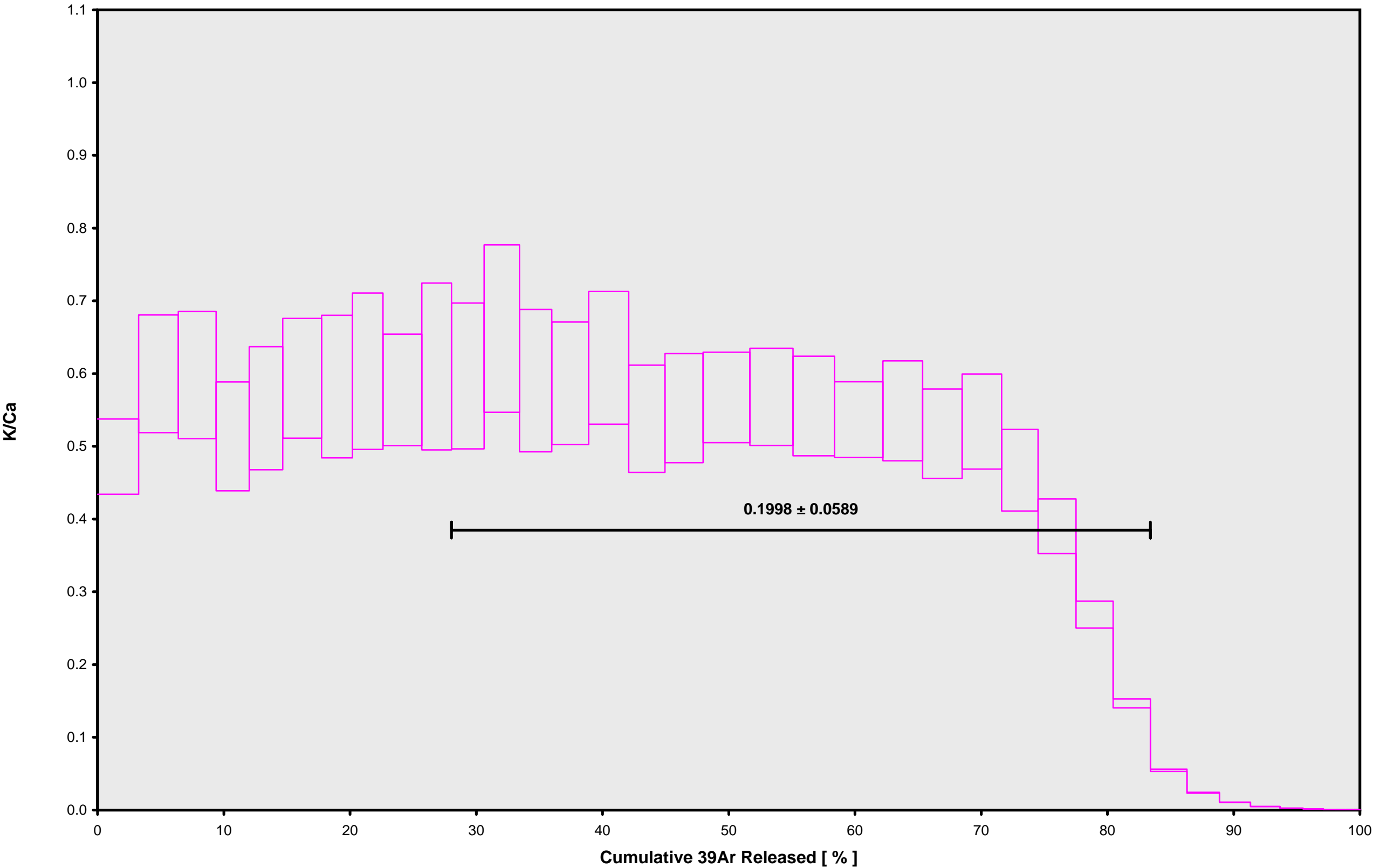
Anthony Koppers

IRR = 14-OSU-06 (6C14-14)

J = 0.00174370 ± 0.00000450



15D00180.AGE >>> 1180010-2 >>> KERGUELEN | FALLOON (14-PIL-01) PROJECT



**Ar-Ages in Ma**

**WEIGHTED PLATEAU**

**$18.07 \pm 0.20$**

**TOTAL FUSION**

**$17.98 \pm 0.19$**

**NORMAL ISOCHRON**

**$17.49 \pm 0.93$**

**INVERSE ISOCHRON**

**$17.53 \pm 0.87$**

**Sample Info**

**Groundmass**

**Kerguelen Plateau**

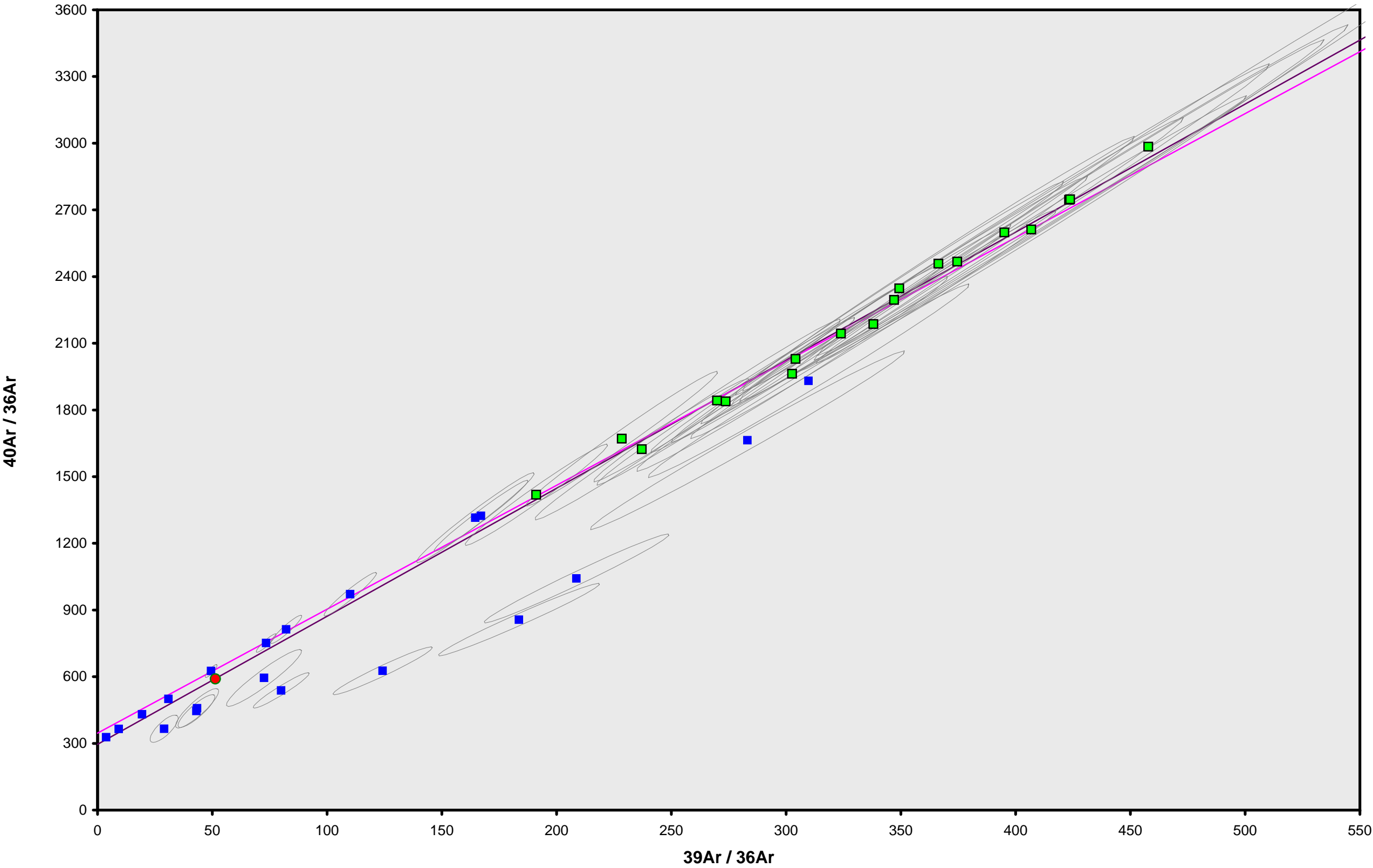
**Anthony Koppers**

**IRR = 14-OSU-06 (6C14-14)**

**$J = 0.00174370 \pm 0.00000450$**



15D00180.AGE >>> 1180010-2 >>> KERGUELEN | FALLOON (14-PIL-01) PROJECT



Ar-Ages in Ma

WEIGHTED PLATEAU

$18.07 \pm 0.20$

TOTAL FUSION

$17.98 \pm 0.19$

NORMAL ISOCHRON

$17.49 \pm 0.93$

INVERSE ISOCHRON

$17.53 \pm 0.87$

MSWD (PROBABILITY)

0.94 (52%)

40AR/36AR INTERCEPT

$346.6 \pm 93.2$

Sample Info

Groundmass

Kerguelen Plateau

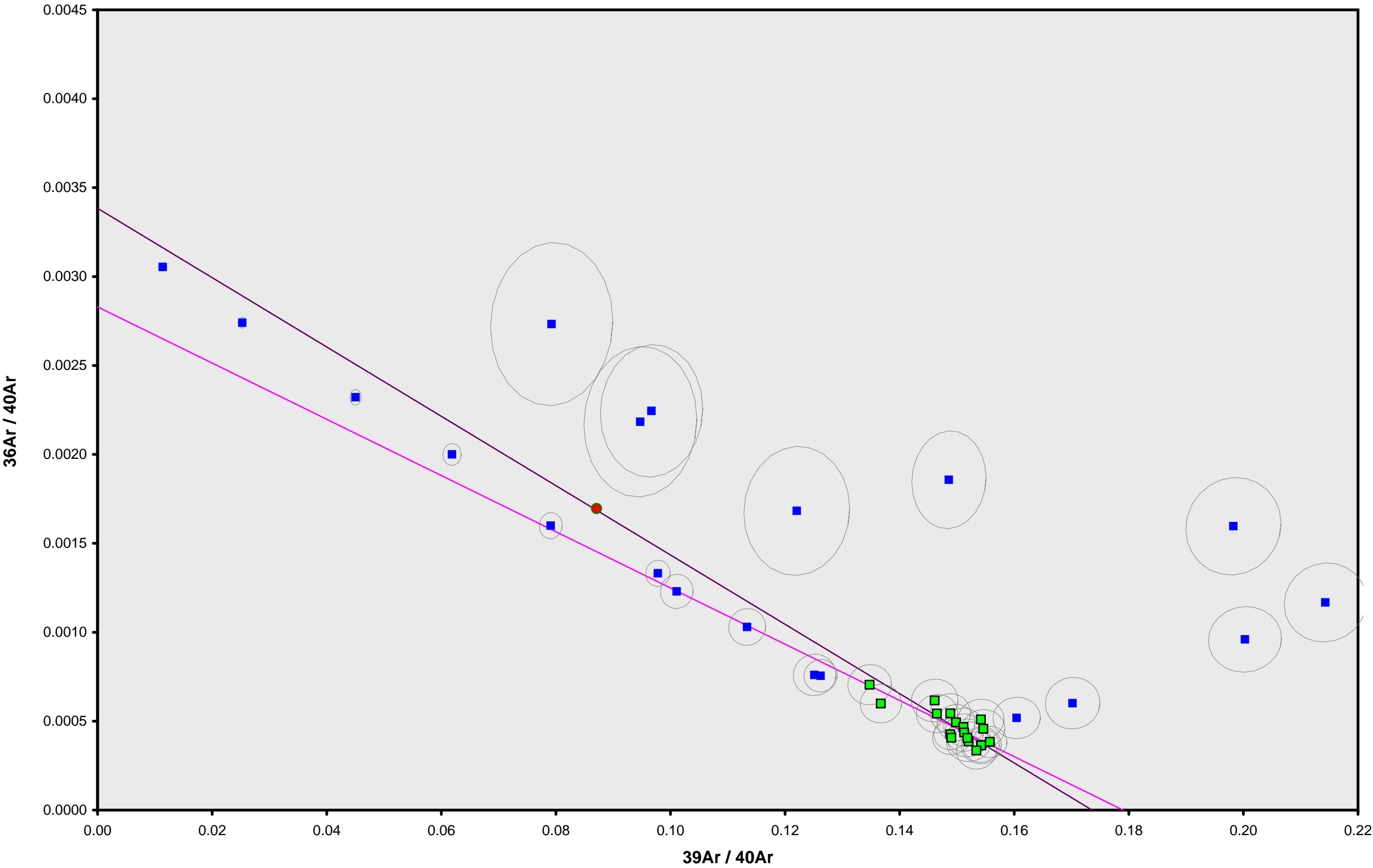
Anthony Koppers

IRR = 14-OSU-06 (6C14-14)

J =  $0.00174370 \pm 0.00000450$



15D00180.AGE >>> 1180010-2 >>> KERGUELEN | FALLOON (14-PIL-01) PROJECT



### Ar-Ages in Ma

#### WEIGHTED PLATEAU

$18.07 \pm 0.20$

#### TOTAL FUSION

$17.98 \pm 0.19$

#### NORMAL ISOCHRON

$17.49 \pm 0.93$

#### INVERSE ISOCHRON

$17.53 \pm 0.87$

#### MSWD (PROBABILITY)

0.91 (55%)

#### SPREADING FACTOR

11.7%

#### 40AR/36AR INTERCEPT

$353.4 \pm 97.3$

### Sample Info

#### Groundmass

Kerguelen Plateau

Anthony Koppers

IRR = 14-OSU-06 (6C14-14)

J =  $0.00174370 \pm 0.00000450$



Incremental Heating			36Ar(a) [V]	37Ar(ca) [V]	38Ar(cl) [V]	39Ar(k) [V]	40Ar(r) [V]	Age ± 2σ (Ka)	40Ar(r) (%)	39Ar(k) (%)	K/Ca ± 2σ
13C2177	500 °C	✓	0.0087735	0.0180725	0.0021657	0.0461195	0.0086757	498.5 ± 1003.5	0.34	4.43	1.097 ± 0.088
13C2179	600 °C	✓	0.0055332	0.0600283	0.0038054	0.1335685	0.0089845	178.2 ± 507.6	0.55	12.83	0.957 ± 0.050
13C2180	700 °C	✓	0.0054681	0.1008202	0.0034725	0.1958145	0.0016953	22.9 ± 343.5	0.10	18.81	0.835 ± 0.041
13C2182	800 °C	✓	0.0045968	0.1001111	0.0020747	0.1800455	0.0023851	35.1 ± 385.9	0.18	17.30	0.773 ± 0.038
13C2183	900 °C	✓	0.0022638	0.0439960	0.0006675	0.0739739	0.0191502	685.7 ± 933.3	2.78	7.11	0.723 ± 0.039
13C2185	1025 °C	✓	0.0026216	0.0578931	0.0005653	0.0700765	0.0192337	727.0 ± 1013.2	2.42	6.73	0.520 ± 0.027
13C2186	1225 °C	✓	0.0132631	0.2944274	0.0025485	0.2323773	0.0007029	8.0 ± 303.9	0.02	22.33	0.339 ± 0.017
13C2188	1400 °C	✓	0.0053939	0.1644573	0.0010138	0.1088189	0.0046188	112.5 ± 783.7	0.29	10.46	0.285 ± 0.014

	Σ		0.0479141	0.8398059	0.0163135	1.0407947	0.0388573				
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Information on Analysis	Results	40(r)/39(k) ± 2σ	Age ± 2σ (Ka)	MSWD	39Ar(k) (%,n)	K/Ca ± 2σ
Sample = 1180256-2 Material = Groundmass Location = Kerguelen Plateau Analyst = Kyle Krawl Project = KERGUELEN Mass Discrimination Law = LIN Irradiation = OSU2C13 J = 0.00146860 ± 0.00000405 FCT-3 = 28.201 ± 0.023 Ma	Age Plateau					
	Recalibrated	0.02206 ± 0.06414 ± 290.67%	58.5 ± 169.9 ± 290.67%	0.77 62%	100.00 8	0.431 ± 0.158
			Full External Error ± 169.9	2.07	2σ Confidence Limit	
			Analytical Error ± 169.9	1.0000	Error Magnification	
	Total Fusion Age					
	Recalibrated	0.03733 ± 0.07085 ± 189.77%	98.9 ± 187.7 ± 189.76%		8	0.533 ± 0.012
			Full External Error ± 187.7			
			Analytical Error ± 187.7			



Normal Isochron			39(k)/36(a) ± 2σ	40(a+r)/36(a) ± 2σ	r.i.
13C2177	500 °C	✓	5.26 ± 0.04	294.51 ± 1.98	0.9661
13C2179	600 °C	✓	24.14 ± 0.24	297.12 ± 4.63	0.5200
13C2180	700 °C	✓	35.81 ± 0.33	295.81 ± 4.65	0.5284
13C2182	800 °C	✓	39.17 ± 0.46	296.02 ± 5.71	0.5872
13C2183	900 °C	✓	32.68 ± 0.76	303.96 ± 11.63	0.5918
13C2185	1025 °C	✓	26.73 ± 0.59	302.84 ± 10.32	0.6104
13C2186	1225 °C	✓	17.52 ± 0.08	295.55 ± 2.01	0.5428
13C2188	1400 °C	✓	20.17 ± 0.32	294.64 ± 5.96	0.7314

Results	40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ka)	MSWD
Normal Isochron Recalibrated	294.20 ± 2.25 ± 0.76%	0.07899 ± 0.11817 ± 149.60%	209.3 ± 313.0 ± 149.59%	0.66 68%
Full External Error ± 313.1 Analytical Error ± 313.0				
Statistics	2σ Confidence Limit Error Magnification Number of Data Points	2.15 1.0000 8	Convergence Number of Iterations Calculated Line	0.000000000137 4 Weighted York-2



Inverse Isochron			39(k)/40(a+r) ± 2σ	36(a)/40(a+r) ± 2σ	r.i.
13C2177	500 °C	✓	0.0178488 ± 0.0000316	0.00339546 ± 0.00002287	0.0661
13C2179	600 °C	✓	0.0812432 ± 0.0010902	0.00336560 ± 0.00005248	0.7844
13C2180	700 °C	✓	0.1210593 ± 0.0016187	0.00338055 ± 0.00005308	0.8057
13C2182	800 °C	✓	0.1323158 ± 0.0020659	0.00337816 ± 0.00006515	0.7979
13C2183	900 °C	✓	0.1075049 ± 0.0033170	0.00328991 ± 0.00012589	0.7926
13C2185	1025 °C	✓	0.0882663 ± 0.0023862	0.00330211 ± 0.00011257	0.7619
13C2186	1225 °C	✓	0.0592806 ± 0.0003434	0.00338349 ± 0.00002301	0.7382
13C2188	1400 °C	✓	0.0684703 ± 0.0009459	0.00339393 ± 0.00006862	0.6340

Results	40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ka)	MSWD
Inverse Isochron	294.18 ± 2.25	0.08095 ± 0.06620	214.5 ± 175.4	0.69
Clustered Points	± 0.77%	± 81.78%	± 81.77%	66%
			Full External Error ± 175.4	
			Analytical Error ± 175.4	
Statistics	2σ Confidence Limit	2.15	Convergence	0.0000030139
	Error Magnification	1.0000	Number of Iterations	4
	Number of Data Points	8	Calculated Line	Weighted York-2
	Spreading Factor	0.9%		



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Relative Abundances			40Ar		39Ar		38Ar		37Ar		36Ar		40(r)/39(k) ± 2σ	Age ± 2σ	40Ar(r)	39Ar(k)	K/Ca ± 2σ
			[V]	1σ	[V]	1σ	[V]	1σ	[V]	1σ	[V]	1σ		(Ka)	(%)	(%)	
13C2177	500 °C	✓	2.583953	0.0011476	0.0461317	0.0000354	0.0043328	0.0000445	0.0180725	0.0007258	0.0087788	0.0000293	0.18811 ± 0.37865	498.5 ± 1003.5	0.34	4.43	1.097 ± 0.088
13C2179	600 °C	✓	1.644194	0.0105318	0.1336089	0.0002665	0.0063679	0.0000416	0.0600283	0.0015593	0.0055500	0.0000246	0.06727 ± 0.19160	178.2 ± 507.6	0.55	12.83	0.957 ± 0.050
13C2180	700 °C	✓	1.617707	0.0105192	0.1958824	0.0003036	0.0067369	0.0000447	0.1008202	0.0024793	0.0054955	0.0000240	0.00866 ± 0.12967	22.9 ± 343.5	0.10	18.81	0.835 ± 0.041
13C2182	800 °C	✓	1.360907	0.0105460	0.1801129	0.0001690	0.0049967	0.0000345	0.1001111	0.0024616	0.0046237	0.0000264	0.01325 ± 0.14567	35.1 ± 385.9	0.18	17.30	0.773 ± 0.038
13C2183	900 °C	✓	0.688173	0.0105249	0.0740035	0.0001487	0.0019386	0.0000320	0.0439960	0.0011757	0.0022756	0.0000260	0.25888 ± 0.35240	685.7 ± 933.3	2.78	7.11	0.723 ± 0.039
13C2185	1025 °C	✓	0.793992	0.0105191	0.0701155	0.0001874	0.0018608	0.0000347	0.0578931	0.0014667	0.0026370	0.0000281	0.27447 ± 0.38256	727.0 ± 1013.2	2.42	6.73	0.520 ± 0.027
13C2186	1225 °C	✓	3.920190	0.0105696	0.2325754	0.0002457	0.0077128	0.0000312	0.2944274	0.0071893	0.0133415	0.0000274	0.00302 ± 0.11472	8.0 ± 303.9	0.02	22.33	0.339 ± 0.017
13C2188	1400 °C	✓	1.589396	0.0105745	0.1089295	0.0002018	0.0032831	0.0000547	0.1644573	0.0040026	0.0054376	0.0000410	0.04244 ± 0.29577	112.5 ± 783.7	0.29	10.46	0.285 ± 0.014
Σ			14.198512	0.0279119	1.0413599	0.0005927	0.0372296	0.0001145	0.8398059	0.0092954	0.0481396	0.0000815					

Information on Analysis and Constants Used in Calculations		Results						
		40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ka)	MSWD	39Ar(k) (%.n)	K/Ca ± 2σ	
Sample = 1180256-2	Age Equations = Min et al. (2000)							
Material = Groundmass	Negative Intensities = Allowed		0.02206 ± 0.06414 ± 290.67%	58.5 ± 169.9 ± 290.67%	0.77 62%	100.00 8	0.431 ± 0.158	
Location = Kerguelen Plateau	Decay Constant 40K = 5.543 ± 0.044 E-10 1/a			Full External Error ± 169.9	2.07	2σ Confidence Limit		
Analyst = Kyle Krawl	Decay Constant 39Ar = 2.940 ± 0.029 E-07 1/h			Analytical Error ± 169.9	1.0000	Error Magnification		
Project = KERGUELEN	Decay Constant 37Ar = 8.230 ± 0.082 E-04 1/h							
Mass Discrimination Law = LIN	Decay Constant 36Cl = 2.236 ± 0.045 E-06 1/a							
Irradiation = OSU2C13	Decay Constant 40K(EC,β <sup>+</sup> ) = 0.580 ± 0.009 E-10 1/a		0.03733 ± 0.07085 ± 189.77%	98.9 ± 187.7 ± 189.76%		8	0.533 ± 0.012	
J = 0.00146860 ± 0.00000405	Decay Constant 40K(β <sup>-</sup> ) = 4.950 ± 0.043 E-10 1/a			Full External Error ± 187.7				
FCT-3 = 28.201 ± 0.023 Ma	Atmospheric Ratio 40/36(a) = 295.50			Analytical Error ± 187.7				
IGSN = Undefined	Atmospheric Ratio 38/36(a) = 0.1869							
Preferred Age = Undefined	Production Ratio 39/37(ca) = 0.000673	294.20 ± 2.25 ± 0.76%	0.07899 ± 0.11817 ± 149.60%	209.3 ± 313.0 ± 149.59%	0.66 68%	100.00 8		
Classification = Undefined	Production Ratio 38/37(ca) = 0.000139			Full External Error ± 313.1	2.15	2σ Confidence Limit		
Experiment Type = Undefined	Production Ratio 36/37(ca) = 0.000264			Analytical Error ± 313.0	1.0000	Error Magnification		
Extraction Method = Undefined	Production Ratio 40/39(k) = 0.001010					4	Number of Iterations	
Heating = 0 sec	Production Ratio 38/39(k) = 0.011380					Convergence		
Isolation = 15.00 min	Production Ratio 36/38(cl) = 316.00 ± 15.80				0.0000000001			
Instrument = MAP215-50	Scaling Ratio K/Ca = 0.430							
Lithology = Undefined	Abundance Ratio 40K/K = 1.1700 ± 0.0199 E-04	294.18 ± 2.25 ± 0.77%	0.08095 ± 0.06620 ± 81.78%	214.5 ± 175.4 ± 81.77%	0.69 66%	100.00 8		
Lat-Lon = Undefined - Undefined	Atomic Weight K = 39.0983 ± 0.0001 g			Full External Error ± 175.4	2.15	2σ Confidence Limit		
R1 ratio = Undefined	Recalibrated to FCT-3 Secondary Standard			Analytical Error ± 175.4	1.0000	Error Magnification		
R2 ratio = Undefined	Standard Age = 28.201 ± 0.023 Ma					4	Number of Iterations	
R3 ratio = Undefined					0.0000030139	Convergence		
R4 ratio = Undefined					1%	Spreading Factor		
R5 ratio = Undefined								
Collector Calibrations =								



OSU Argon Geochronology Lab																																			
Degassing Patterns			36Ar(a) [V]	%1σ	36Ar(c) [V]	%1σ	36Ar(ca) [V]	%1σ	36Ar(cl) [V]	%1σ	37Ar(ca) [V]	%1σ	38Ar(a) [V]	%1σ	38Ar(c) [V]	%1σ	38Ar(k) [V]	%1σ	38Ar(ca) [V]	%1σ	38Ar(cl) [V]	%1σ	39Ar(k) [V]	%1σ	39Ar(ca) [V]	%1σ	40Ar(r) [V]	%1σ	40Ar(a) [V]	%1σ	40Ar(c) [V]	%1σ	40Ar(k) [V]	%1σ	
	13C2177	500 °C	✓	0.0087735	0.33	0.0000000	0.00	0.0000048	4.02	0.0000005	5.77	0.0180725	4.02	0.0016398	0.33	0.0000000	0.00	0.0005248	0.08	0.0000025	4.02	0.0021657	7.89	0.0461195	0.08	0.0000122	4.02	0.0086757	100.64	2.592582	0.33	0.0000000	0.00	0.0000466	0.08
	13C2179	600 °C	✓	0.0055332	0.44	0.0000000	0.00	0.0000158	2.60	0.0000009	5.50	0.0600283	2.60	0.0010342	0.44	0.0000000	0.00	0.0015200	0.20	0.0000083	2.60	0.0038054	7.70	0.1335685	0.20	0.0000404	2.60	0.0089845	142.42	1.635074	0.44	0.0000000	0.00	0.0001349	0.20
	13C2180	700 °C	✓	0.0054681	0.44	0.0000000	0.00	0.0000266	2.46	0.0000008	5.54	0.1008202	2.46	0.0010220	0.44	0.0000000	0.00	0.0022284	0.16	0.0000140	2.46	0.0034725	7.73	0.1958145	0.16	0.0000679	2.46	0.0016953	748.89	1.615814	0.44	0.0000000	0.00	0.0001978	0.16
	13C2182	800 °C	✓	0.0045968	0.57	0.0000000	0.00	0.0000264	2.46	0.0000005	5.64	0.1001111	2.46	0.0008591	0.57	0.0000000	0.00	0.0020489	0.09	0.0000139	2.46	0.0020747	7.80	0.1800455	0.09	0.0000674	2.46	0.0023851	549.82	1.358340	0.57	0.0000000	0.00	0.0001818	0.09
	13C2183	900 °C	✓	0.0022638	1.15	0.0000000	0.00	0.0000116	2.67	0.0000002	7.25	0.0439960	2.67	0.0004231	1.15	0.0000000	0.00	0.0008418	0.20	0.0000061	2.67	0.0006675	9.03	0.0739739	0.20	0.0000296	2.67	0.0191502	68.06	0.668948	1.15	0.0000000	0.00	0.0000747	0.20
	13C2185	1025 °C	✓	0.0026216	1.07	0.0000000	0.00	0.0000153	2.53	0.0000001	8.23	0.0578931	2.53	0.0004900	1.07	0.0000000	0.00	0.0007975	0.27	0.0000080	2.53	0.0005653	9.84	0.0700765	0.27	0.0000390	2.53	0.0192337	69.69	0.774688	1.07	0.0000000	0.00	0.0000708	0.27
	13C2186	1225 °C	✓	0.0132631	0.21	0.0000000	0.00	0.0000777	2.44	0.0000006	5.53	0.2944274	2.44	0.0024789	0.21	0.0000000	0.00	0.0026445	0.11	0.0000409	2.44	0.0025485	7.72	0.2323773	0.11	0.0001981	2.44	0.0007029	1896.25	3.919252	0.21	0.0000000	0.00	0.0002347	0.11
	13C2188	1400 °C	✓	0.0053939	0.76	0.0000000	0.00	0.0000434	2.43	0.0000002	7.67	0.1644573	2.43	0.0010081	0.76	0.0000000	0.00	0.0012384	0.19	0.0000229	2.43	0.0010138	9.37	0.1088189	0.19	0.0001107	2.43	0.0046188	348.42	1.593905	0.76	0.0000000	0.00	0.0001099	0.19
		Σ		0.0479141	0.17	0.0000000	0.00	0.0002217	1.11	0.0000038	2.30	0.8398059	1.11	0.0089551	0.17	0.0000000	0.00	0.0118442	0.06	0.0001167	1.11	0.0163135	3.17	1.0407947	0.06	0.0005652	1.11	0.0388573	94.88	14.158604	0.17	0.0000000	0.00	0.0010512	0.06
	Σ									0.0481396	0.17	0.8398059	1.11								0.0372296	1.39			1.0413599	0.06							14.198512	0.31	



Additional Parameters			40Ar/39Ar	1σ	37Ar/39Ar	1σ	36Ar/39Ar	1σ	Time (days)	37Ar (decay)	39Ar (decay)	40Ar (moles)
13C2177	500 °C	✓	56.012566	0.049646	0.391760	0.015736	0.190299	0.000652	121.809	11.116605	1.00086074	5.168E-13
13C2179	600 °C	✓	12.306015	0.082559	0.449284	0.011705	0.041539	0.000202	121.845	11.124537	1.00086099	3.288E-13
13C2180	700 °C	✓	8.258566	0.055207	0.514698	0.012682	0.028055	0.000130	121.863	11.128352	1.00086111	3.235E-13
13C2182	800 °C	✓	7.555856	0.058980	0.555824	0.013677	0.025671	0.000148	121.898	11.136140	1.00086136	2.722E-13
13C2183	900 °C	✓	9.299192	0.143444	0.594513	0.015933	0.030749	0.000357	121.915	11.139959	1.00086149	1.376E-13
13C2185	1025 °C	✓	11.324060	0.153049	0.825681	0.021035	0.037610	0.000413	121.953	11.148213	1.00086175	1.588E-13
13C2186	1225 °C	✓	16.855563	0.048809	1.265944	0.030941	0.057364	0.000133	121.971	11.152190	1.00086188	7.840E-13
13C2188	1400 °C	✓	14.591047	0.100770	1.509758	0.036851	0.049918	0.000388	122.008	11.160300	1.00086214	3.179E-13



Procedure Blanks		36Ar [V]	1σ	37Ar [V]	1σ	38Ar [V]	1σ	39Ar [V]	1σ	40Ar [V]	1σ
13C2177	500 °C	0.0003106	0.0000182	0.0000398	0.0000235	0.0000157	0.0000176	0.0000348	0.0000231	0.0063094	0.0000542
13C2179	600 °C	0.0004879	0.0000186	0.0000290	0.0000248	0.0000001	0.0000172	0.0002205	0.0001334	0.0476972	0.0105048
13C2180	700 °C	0.0004489	0.0000186	0.0000364	0.0000248	0.0000001	0.0000172	0.0003083	0.0001334	0.0419916	0.0105048
13C2182	800 °C	0.0003823	0.0000186	0.0000454	0.0000248	0.0000049	0.0000172	0.0003867	0.0001334	0.0303523	0.0105048
13C2183	900 °C	0.0003560	0.0000186	0.0000469	0.0000248	0.0000097	0.0000172	0.0003757	0.0001334	0.0246467	0.0105048
13C2185	1025 °C	0.0003134	0.0000186	0.0000435	0.0000248	0.0000253	0.0000172	0.0002412	0.0001334	0.0123227	0.0105048
13C2186	1225 °C	0.0002998	0.0000186	0.0000386	0.0000248	0.0000354	0.0000172	0.0001224	0.0001334	0.0063890	0.0105048
13C2188	1400 °C	0.0002862	0.0000186	0.0000222	0.0000248	0.0000613	0.0000172	0.0002286	0.0001334	0.0057068	0.0105048



OSU Argon Geochronology Lab																						
Intercept Values		36Ar [V]	1σ	r2		37Ar [V]	1σ	r2		38Ar [V]	1σ	r2		39Ar [V]	1σ	r2		40Ar [V]	1σ	r2		
	13C2177	500 °C	0.0094244	0.0000243	0.9847	EXP #	0.0017125	0.0000483	0.3614	LIN # 2 9	0.0044340	0.0000418	0.6330	LIN #	0.0466106	0.0000272	0.9987	EXP #	2.5936344	0.0011479	0.9997	EXP # 2 3 4 7 11
	13C2179	600 °C	0.0062500	0.0000175	0.9616	EXP # 1 2 3	0.0055810	0.0000479	0.9228	EXP # 2 4	0.0064937	0.0000388	0.9480	LIN # 5	0.1351159	0.0002336	0.9939	EXP #	1.6940932	0.0007549	0.9998	EXP # 2 3 4
	13C2180	700 °C	0.0061550	0.0000167	0.9906	EXP # 1 3	0.0093589	0.0000385	0.9754	LIN # 4	0.0068706	0.0000422	0.9348	LIN #	0.1980966	0.0002760	0.9970	EXP #	1.6620259	0.0005523	0.9999	EXP # 2 3 4 7 9
	13C2182	800 °C	0.0051826	0.0000201	0.9382	EXP # 1 2 5	0.0092950	0.0000376	0.9871	EXP # 3 4	0.0051001	0.0000307	0.9331	LIN #	0.1822339	0.0001061	0.9995	EXP #	1.3930705	0.0009329	0.9996	EXP # 2 3 4 7 9
	13C2183	900 °C	0.0027187	0.0000196	0.9144	LIN # 2	0.0041105	0.0000398	0.9266	EXP # 6	0.0019865	0.0000277	0.8463	LIN #	0.0750920	0.0000685	0.9988	EXP # 1	0.7137473	0.0006524	0.9994	EXP # 2 3 4 5 8
	13C2185	1025 °C	0.0030510	0.0000225	0.8830	LIN # 1	0.0053861	0.0000333	0.9720	EXP #	0.0019226	0.0000309	0.7671	LIN #	0.0710248	0.0001341	0.9935	EXP #	0.8072835	0.0005497	0.9995	EXP # 2 3 4 9
	13C2186	1225 °C	0.0141500	0.0000216	0.9948	EXP #	0.0272025	0.0001009	0.9817	LIN # 5	0.0079004	0.0000268	0.9469	LIN #	0.2349366	0.0002090	0.9962	EXP #	3.9316899	0.0011709	0.9996	EXP #
	13C2188	1400 °C	0.0059313	0.0000383	0.9500	EXP # 1 2 7	0.0151840	0.0000421	0.9912	EXP # 3	0.0034093	0.0000531	0.5073	LIN #	0.1097491	0.0001539	0.9933	EXP #	1.5857509	0.0012140	0.9988	EXP # 2 3



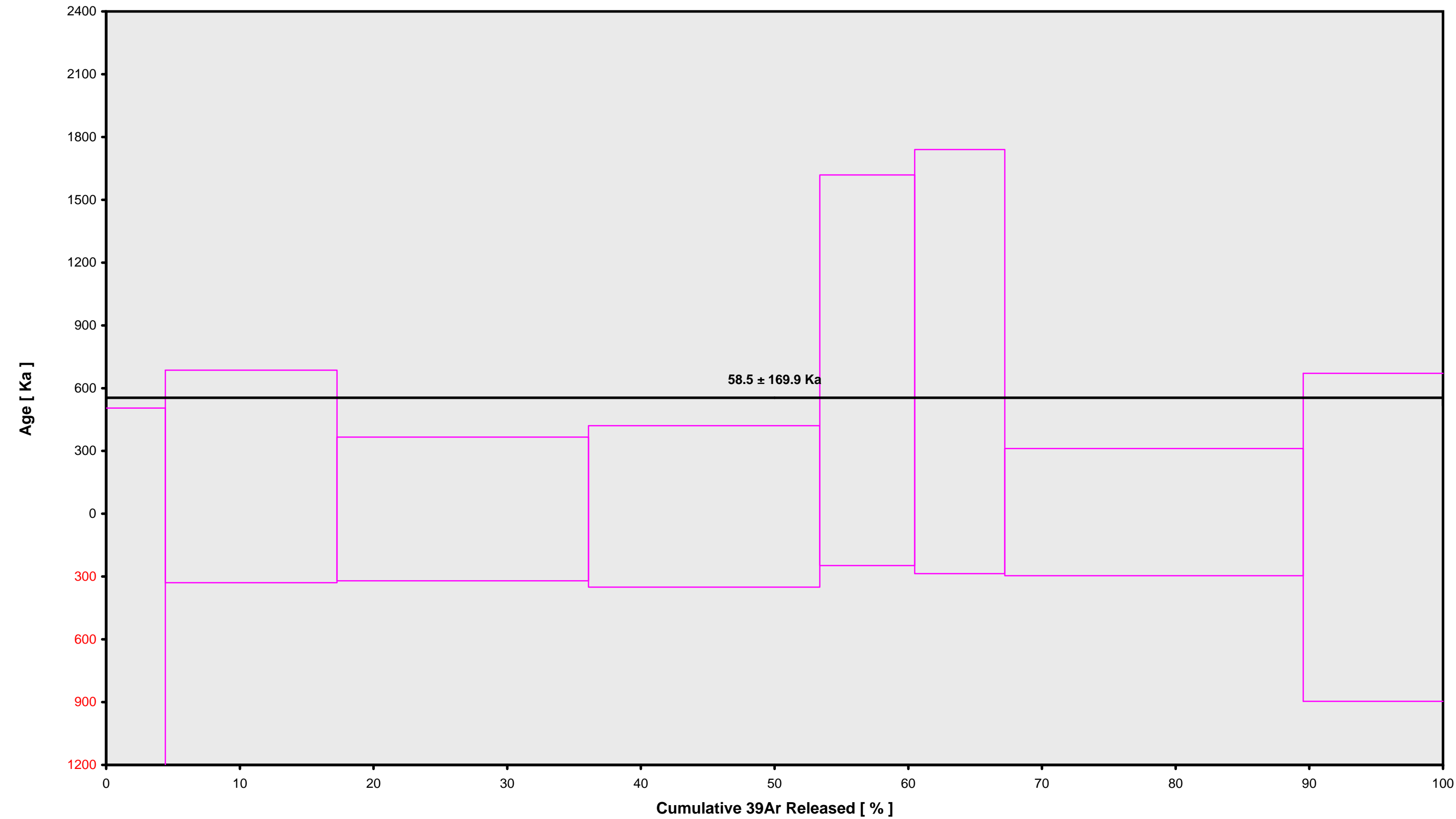
OSU Argon Geochronology Lab																																		
Sample Parameters			Sample	Material	Location	Analyst	Temp	Standard Name	Standard (in Ma)	%1σ	Standard Reference	Standard 40Ar/39Ar	%1σ	J	%1σ	Air 40Ar/36Ar	%1σ	MDF	%1σ	Volume Ratio	Sensitivity (mol/volt)	Day	Month	Year	Hour	Min	Resist	Irradiation	X-pos	Y-pos	Z/H-pos	Project	Experiment	Nmb
	13C2177	500 °C	1180256-2	Groundmass	Kerguelen Plateau	Kyle Krawl	500	FCT-3	28.201	0.083	Kuiper et al., 2008			0.00146860	0.276			1.0092	0.001	0.9987	2E-13	5	AUG	2013	11	26	1	OSU2C13	0.00	0.00	60.60	Kerguelen	13C2177	01
	13C2179	600 °C	1180256-2	Groundmass	Kerguelen Plateau	Kyle Krawl	600	FCT-3	28.201	0.083	Kuiper et al., 2008			0.00146860	0.276			1.0092	0.001	0.9987	2E-13	5	AUG	2013	12	18	1	OSU2C13	0.00	0.00	60.60	Kerguelen	13C2177	01
	13C2180	700 °C	1180256-2	Groundmass	Kerguelen Plateau	Kyle Krawl	700	FCT-3	28.201	0.083	Kuiper et al., 2008			0.00146860	0.276			1.0092	0.001	0.9986	2E-13	5	AUG	2013	12	43	1	OSU2C13	0.00	0.00	60.60	Kerguelen	13C2177	01
	13C2182	800 °C	1180256-2	Groundmass	Kerguelen Plateau	Kyle Krawl	800	FCT-3	28.201	0.083	Kuiper et al., 2008			0.00146860	0.276			1.0092	0.001	0.9987	2E-13	5	AUG	2013	13	34	1	OSU2C13	0.00	0.00	60.60	Kerguelen	13C2177	01
	13C2183	900 °C	1180256-2	Groundmass	Kerguelen Plateau	Kyle Krawl	900	FCT-3	28.201	0.083	Kuiper et al., 2008			0.00146860	0.276			1.0092	0.001	0.9987	2E-13	5	AUG	2013	13	59	1	OSU2C13	0.00	0.00	60.60	Kerguelen	13C2177	01
	13C2185	1025 °C	1180256-2	Groundmass	Kerguelen Plateau	Kyle Krawl	1025	FCT-3	28.201	0.083	Kuiper et al., 2008			0.00146860	0.276			1.0092	0.001	0.9988	2E-13	5	AUG	2013	14	53	1	OSU2C13	0.00	0.00	60.60	Kerguelen	13C2177	01
	13C2186	1225 °C	1180256-2	Groundmass	Kerguelen Plateau	Kyle Krawl	1225	FCT-3	28.201	0.083	Kuiper et al., 2008			0.00146860	0.276			1.0092	0.001	0.9987	2E-13	5	AUG	2013	15	19	1	OSU2C13	0.00	0.00	60.60	Kerguelen	13C2177	01
	13C2188	1400 °C	1180256-2	Groundmass	Kerguelen Plateau	Kyle Krawl	1400	FCT-3	28.201	0.083	Kuiper et al., 2008			0.00146860	0.276			1.0092	0.001	0.9987	2E-13	5	AUG	2013	16	12	1	OSU2C13	0.00	0.00	60.60	Kerguelen	13C2177	01



Irradiation Constants		OSU Argon Geochronology Lab																										
		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	
13C2177	500 °C	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0	
13C2179	600 °C	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0	
13C2180	700 °C	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0	
13C2182	800 °C	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0	
13C2183	900 °C	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0	
13C2185	1025 °C	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0	
13C2186	1225 °C	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0	
13C2188	1400 °C	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0	



13C2177.AGE >>> 1180256-2 >>> KERGUELEN PROJECT



Ar-Ages in Ka

WEIGHTED PLATEAU

58.5 ± 169.9

TOTAL FUSION

98.9 ± 187.7

NORMAL ISOCHRON

209.3 ± 313.0

INVERSE ISOCHRON

214.5 ± 175.4

MSWD (PROBABILITY)

0.77 (62%)

Sample Info

Groundmass

Kerguelen Plateau

Kyle Krawl

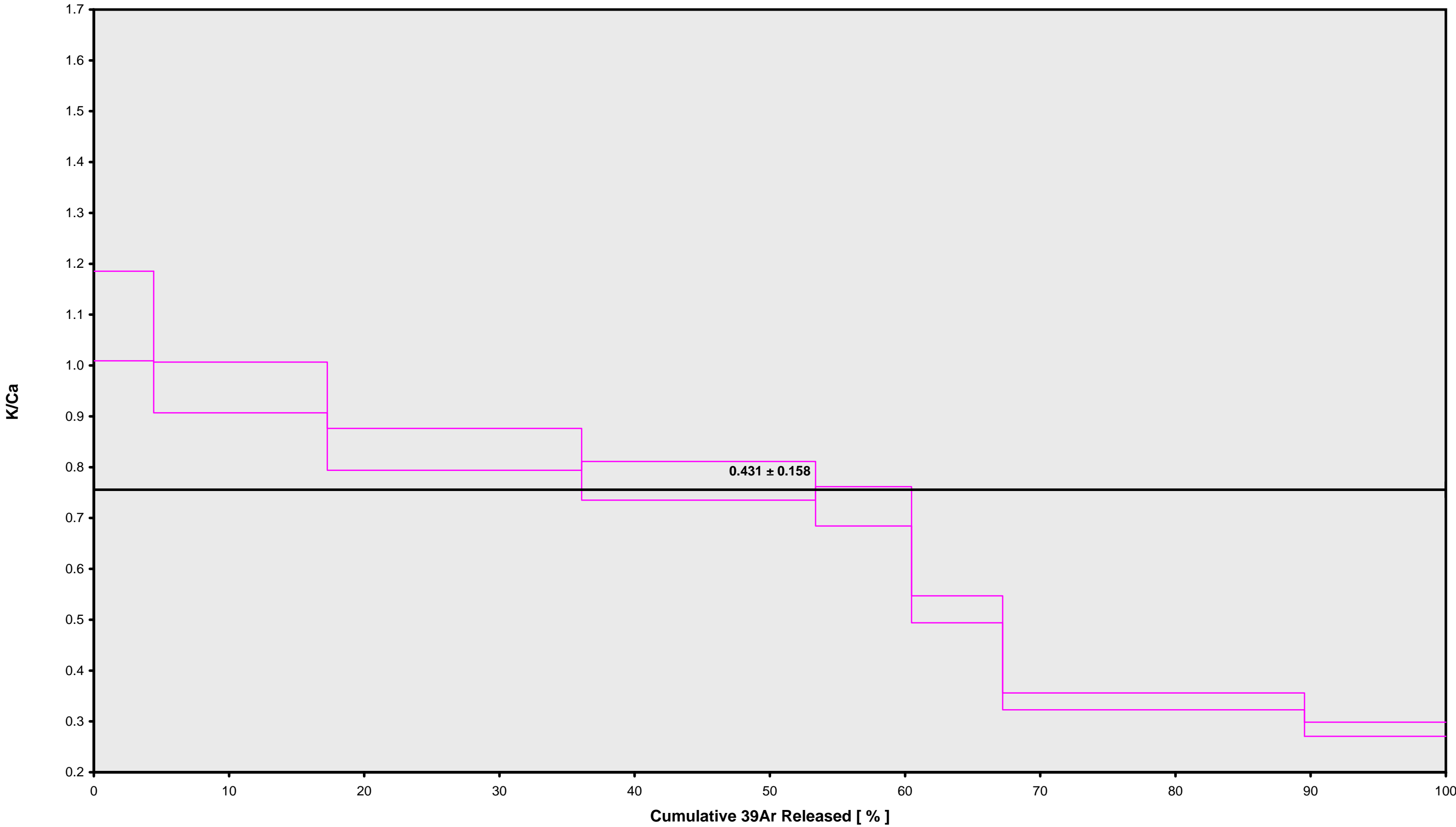
IRR = OSU2C13

J = 0.00146860 ± 0.00000405

RECALIBRATED AGE



13C2177.AGE >>> 1180256-2 >>> KERGUELEN PROJECT



Ar-Ages in Ka

WEIGHTED PLATEAU

58.5 ± 169.9

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Groundmass

Kerguelen Plateau

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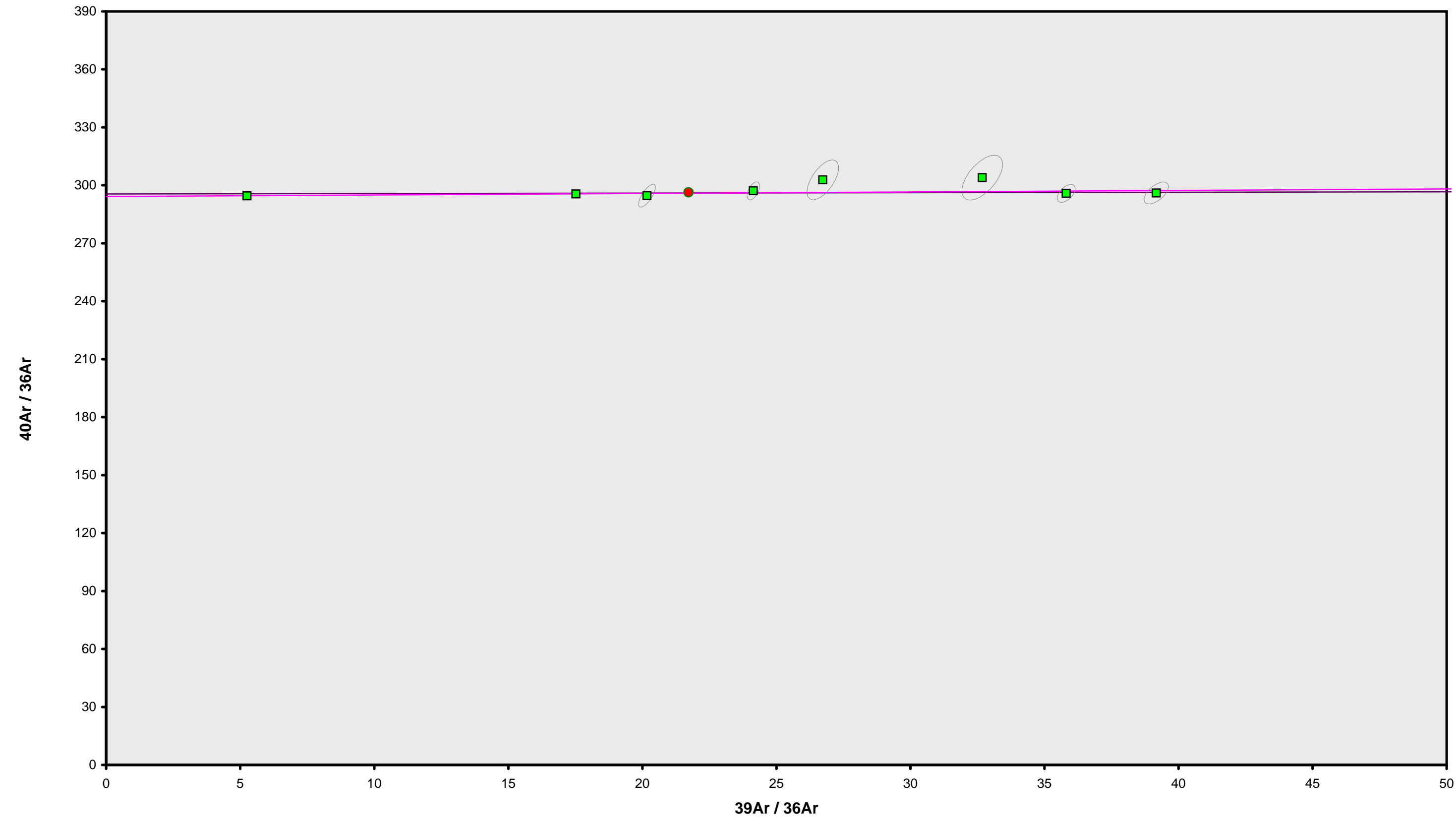
IRR = OSU2C13

J = 0.00146860 ± 0.00000405

RECALIBRATED AGE



13C2177.AGE >>> 1180256-2 >>> KERGUELEN PROJECT



Ar-Ages in Ka

WEIGHTED PLATEAU

58.5 ± 169.9

TOTAL FUSION

98.9 ± 187.7

NORMAL ISOCHRON

209.3 ± 313.0

INVERSE ISOCHRON

214.5 ± 175.4

MSWD (PROBABILITY)

0.66 (68%)

40AR/36AR INTERCEPT

294.2 ± 2.3

Sample Info

Groundmass

Kerguelen Plateau

Kyle Krawl

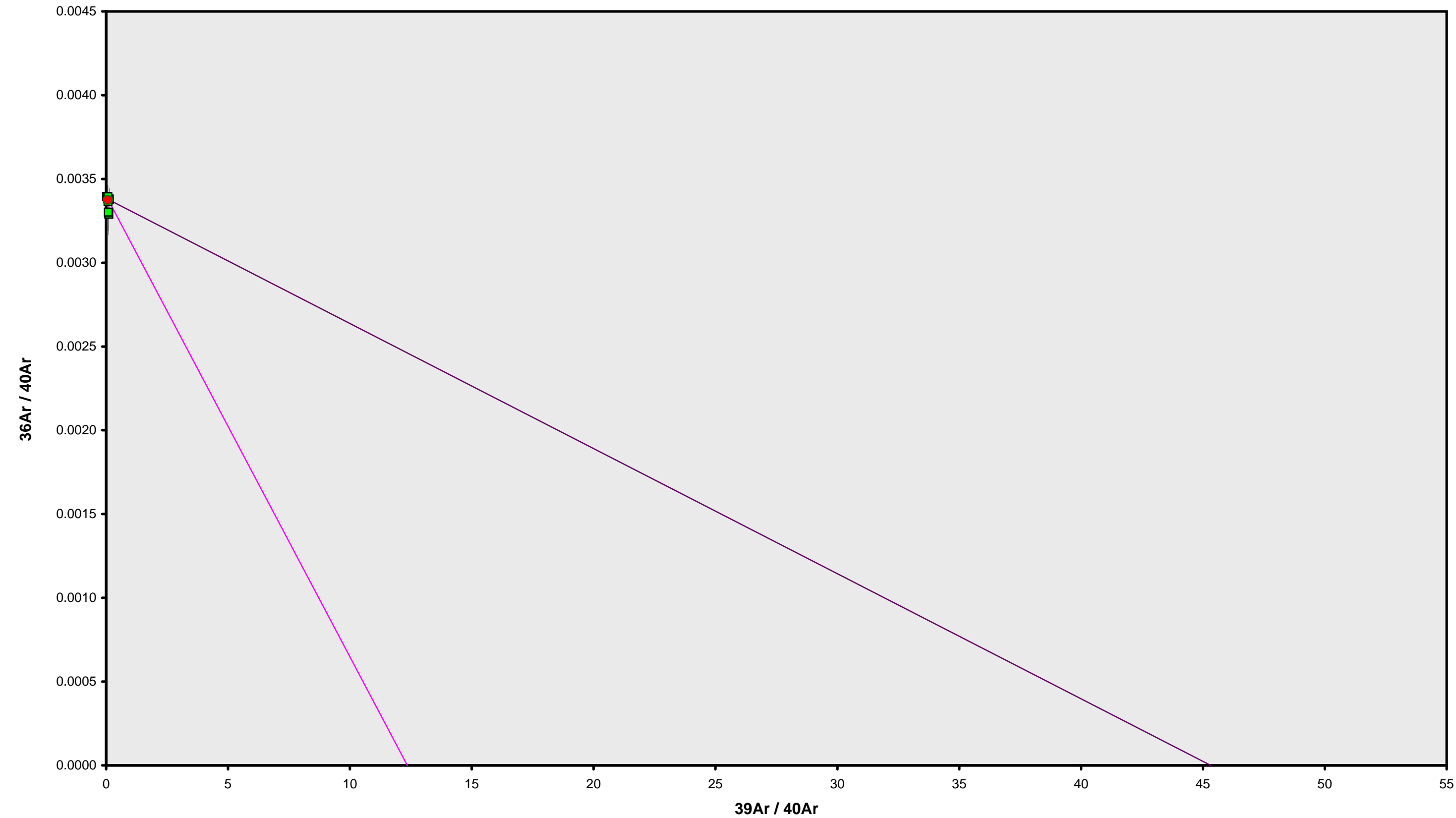
IRR = OSU2C13

J = 0.00146860 ± 0.00000405

RECALIBRATED AGE



13C2177.AGE >>> 1180256-2 >>> KERGUELEN PROJECT



Ar-Ages in Ka

WEIGHTED PLATEAU

58.5 ± 169.9

TOTAL FUSION

98.9 ± 187.7

NORMAL ISOCHRON

209.3 ± 313.0

INVERSE ISOCHRON

214.5 ± 175.4

MSWD (PROBABILITY)

0.69 (66%)

SPREADING FACTOR

0.9%

40AR/36AR INTERCEPT

294.2 ± 2.3

Sample Info

Groundmass

Kerguelen Plateau

Kyle Krawl

IRR = OSU2C13

J = 0.00146860 ± 0.00000405

RECALIBRATED AGE



Incremental Heating			36Ar(a) [V]	37Ar(ca) [V]	38Ar(cl) [V]	39Ar(k) [V]	40Ar(r) [V]	Age ± 2σ (Ka)	40Ar(r) (%)	39Ar(k) (%)	K/Ca ± 2σ
13C2140	500 °C	✓	0.0023597	0.0073972	0.0009026	0.0204653	0.0124986	1640.2 ± 1973.2	1.76	2.17	1.190 ± 0.141
13C2142	600 °C	✓	0.0051358	0.0402875	0.0032424	0.0884058	0.0087948	267.3 ± 353.0	0.58	9.39	0.944 ± 0.046
13C2143	700 °C	✓	0.0036891	0.0630550	0.0023263	0.1089006	0.0195893	483.3 ± 290.8	1.77	11.57	0.743 ± 0.035
13C2145	800 °C	✓	0.0031319	0.0812798	0.0015899	0.1319963	0.0325666	662.8 ± 187.6	3.40	14.02	0.698 ± 0.033
13C2146	900 °C	✓	0.0022355	0.0581027	0.0006158	0.0902362	0.0186371	554.9 ± 322.1	2.74	9.59	0.668 ± 0.032
13C2148	1050 °C	✓	0.0055257	0.1029696	0.0010868	0.1346617	0.0226940	452.8 ± 240.7	1.37	14.31	0.562 ± 0.026
13C2149	1250 °C	✓	0.0143987	0.2675053	0.0022006	0.2525444	0.0597647	635.8 ± 187.0	1.39	26.83	0.406 ± 0.019
13C2151	1400 °C		0.0051756	0.1359157	0.0007940	0.1141005	0.0208530	491.1 ± 298.9	1.38	12.12	0.361 ± 0.017

	Σ		0.0416521	0.7565128	0.0127583	0.9413108	0.1536922				
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Information on Analysis	Results	40(r)/39(k) ± 2σ	Age ± 2σ (Ka)	MSWD	39Ar(k) (%,n)	K/Ca ± 2σ
Sample = 1180051-2	Age Plateau	0.20919 ± 0.03908	562.0 ± 105.0	1.15	87.88	
Material = Groundmass	Recalibrated	± 18.68%	± 18.69%	33%	7	0.583 ± 0.136
Location = Kerguelen Plateau			Full External Error ± 105.8	2.15	2σ Confidence Limit	
Analyst = Trevor Smith			Analytical Error ± 105.0	1.0707	Error Magnification	
Project = KERGUELEN						
Mass Discrimination Law = LIN	Total Fusion Age	0.16327 ± 0.03857	438.7 ± 103.6		8	0.535 ± 0.011
Irradiation = OSU2C13	Recalibrated	± 23.62%	± 23.62%			
J = 0.00148940 ± 0.00000405			Full External Error ± 104.1			
FCT-3 = 28.201 ± 0.023 Ma			Analytical Error ± 103.6			



Normal Isochron			39(k)/36(a) ± 2σ	40(a+r)/36(a) ± 2σ	r.i.
13C2140	500 °C	✓	8.67 ± 0.19	300.80 ± 6.49	0.9531
13C2142	600 °C	✓	17.21 ± 0.14	297.21 ± 2.27	0.9275
13C2143	700 °C	✓	29.52 ± 0.33	300.81 ± 3.25	0.9421
13C2145	800 °C	✓	42.15 ± 0.43	305.90 ± 3.04	0.9476
13C2146	900 °C	✓	40.36 ± 0.66	303.84 ± 4.98	0.9891
13C2148	1050 °C	✓	24.37 ± 0.19	299.61 ± 2.21	0.9532
13C2149	1250 °C	✓	17.54 ± 0.07	299.65 ± 1.24	0.9619
13C2151	1400 °C		22.05 ± 0.19	291.47 ± 2.42	0.9117

Results	40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ka)	MSWD
Normal Isochron Recalibrated	295.05 ± 2.88 ± 0.98%	0.22657 ± 0.12249 ± 54.06%	608.7 ± 329.0 ± 54.06%	1.35
			Full External Error ± 329.3 Analytical Error ± 329.0	24%
Statistics	2σ Confidence Limit Error Magnification Number of Data Points	2.26 1.1620 7	Convergence Number of Iterations Calculated Line	0.000000002120 6 Weighted York-2



Inverse Isochron		39(k)/40(a+r) ± 2σ		36(a)/40(a+r) ± 2σ	r.i.
13C2140	500 °C	✓	0.0288328 ± 0.0001945	0.00332450 ± 0.00007170	0.0514
13C2142	600 °C	✓	0.0579173 ± 0.0001743	0.00336460 ± 0.00002575	0.0678
13C2143	700 °C	✓	0.0981343 ± 0.0003713	0.00332436 ± 0.00003594	0.0531
13C2145	800 °C	✓	0.1377756 ± 0.0004484	0.00326906 ± 0.00003252	0.1092
13C2146	900 °C	✓	0.1328497 ± 0.0003228	0.00329124 ± 0.00005390	0.0361
13C2148	1050 °C	✓	0.0813401 ± 0.0001895	0.00333771 ± 0.00002466	0.0200
13C2149	1250 °C	✓	0.0585327 ± 0.0000665	0.00333722 ± 0.00001378	0.1659
13C2151	1400 °C		0.0756358 ± 0.0002723	0.00343087 ± 0.00002849	0.0977

Results	40(a)/36(a) ± 2σ		40(r)/39(k) ± 2σ		Age ± 2σ (Ka)	MSWD
Inverse Isochron	295.07 ± 2.88		0.22616 ± 0.10419		607.6 ± 279.9	1.35
Clustered Points	± 0.97%		± 46.07%		± 46.07%	24%
				Full External Error	± 280.2	
				Analytical Error	± 279.9	
Statistics	2σ Confidence Limit	2.26	Convergence		0.0000008188	
	Error Magnification	1.1628	Number of Iterations		4	
	Number of Data Points	7	Calculated Line		Weighted York-2	
	Spreading Factor	2.5%				



OSU Argon Geochronology Lab																	
Relative Abundances			40Ar [V]	1σ	39Ar [V]	1σ	38Ar [V]	1σ	37Ar [V]	1σ	36Ar [V]	1σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ka)	40Ar(r) (%)	39Ar(k) (%)	K/Ca ± 2σ
13C2140	500 °C	✓	0.709812	0.0009710	0.0204703	0.0000631	0.0015775	0.0000265	0.0073972	0.0004364	0.0023619	0.0000252	0.61072 ± 0.73502	1640.2 ± 1973.2	1.76	2.17	1.190 ± 0.141
13C2142	600 °C	✓	1.526505	0.0009538	0.0884330	0.0001210	0.0052140	0.0000367	0.0402875	0.0009894	0.0051471	0.0000194	0.09948 ± 0.13141	267.3 ± 353.0	0.58	9.39	0.944 ± 0.046
13C2143	700 °C	✓	1.109819	0.0008179	0.1089430	0.0001897	0.0042638	0.0000391	0.0630550	0.0014873	0.0037062	0.0000198	0.17988 ± 0.10826	483.3 ± 290.8	1.77	11.57	0.743 ± 0.035
13C2145	800 °C	✓	0.958186	0.0009007	0.1320510	0.0001753	0.0036887	0.0000276	0.0812798	0.0018911	0.0031537	0.0000153	0.24672 ± 0.06983	662.8 ± 187.6	3.40	14.02	0.698 ± 0.033
13C2146	900 °C	✓	0.679327	0.0004072	0.0902753	0.0000954	0.0020685	0.0000330	0.0581027	0.0013809	0.0022510	0.0000183	0.20654 ± 0.11990	554.9 ± 322.1	2.74	9.59	0.668 ± 0.032
13C2148	1050 °C	✓	1.655674	0.0004853	0.1347310	0.0001518	0.0036663	0.0000286	0.1029696	0.0023799	0.0055531	0.0000203	0.16853 ± 0.08959	452.8 ± 240.7	1.37	14.31	0.562 ± 0.026
13C2149	1250 °C	✓	4.314840	0.0019033	0.2527244	0.0000903	0.0078029	0.0000319	0.2675053	0.0062645	0.0144698	0.0000290	0.23665 ± 0.06960	635.8 ± 187.0	1.39	26.83	0.406 ± 0.019
13C2151	1400 °C		1.508667	0.0012888	0.1141919	0.0001807	0.0030787	0.0000418	0.1359157	0.0031419	0.0052117	0.0000210	0.18276 ± 0.11123	491.1 ± 298.9	1.38	12.12	0.361 ± 0.017
Σ			12.462829	0.0030030	0.9418199	0.0003979	0.0313604	0.0000949	0.7565128	0.0079777	0.0418546	0.0000605					

Information on Analysis and Constants Used in Calculations		Results						
		40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ka)	MSWD	39Ar(k) (%.n)	K/Ca ± 2σ	
Sample = 1180051-2	Age Equations = Min et al. (2000)							
Material = Groundmass	Negative Intensities = Allowed							
Location = Kerguelen Plateau	Decay Constant 40K = 5.543 ± 0.044 E-10 1/a		0.20919 ± 0.03908 ± 18.68%	562.0 ± 105.0 ± 18.69%	1.15 33%	87.88 7	0.583 ± 0.136	
Analyst = Trevor Smith	Decay Constant 39Ar = 2.940 ± 0.029 E-07 1/h			Full External Error ± 105.8	2.15	2σ Confidence Limit		
Project = KERGUELEN	Decay Constant 37Ar = 8.230 ± 0.082 E-04 1/h			Analytical Error ± 105.0	1.0707	Error Magnification		
Mass Discrimination Law = LIN	Decay Constant 36Cl = 2.236 ± 0.045 E-06 1/a							
Irradiation = OSU2C13	Decay Constant 40K(EC,β <sup>+</sup> ) = 0.580 ± 0.009 E-10 1/a		0.16327 ± 0.03857 ± 23.62%	438.7 ± 103.6 ± 23.62%		8	0.535 ± 0.011	
J = 0.00148940 ± 0.00000405	Decay Constant 40K(β <sup>-</sup> ) = 4.950 ± 0.043 E-10 1/a			Full External Error ± 104.1				
FCT-3 = 28.201 ± 0.023 Ma	Atmospheric Ratio 40/36(a) = 295.50			Analytical Error ± 103.6				
IGSN = Undefined	Atmospheric Ratio 38/36(a) = 0.1869							
Preferred Age = Undefined	Production Ratio 39/37(ca) = 0.000673	295.05 ± 2.88	0.22657 ± 0.12249 ± 54.06%	608.7 ± 329.0 ± 54.06%	1.35 24%	87.88 7		
Classification = Undefined	Production Ratio 38/37(ca) = 0.000139			Full External Error ± 329.3	2.26	2σ Confidence Limit		
Experiment Type = Undefined	Production Ratio 36/37(ca) = 0.000264			Analytical Error ± 329.0	1.1620	Error Magnification		
Extraction Method = Undefined	Production Ratio 40/39(k) = 0.001010				6	Number of Iterations		
Heating = 0 sec	Production Ratio 38/39(k) = 0.011380				0.0000000021	Convergence		
Isolation = 15.00 min	Production Ratio 36/38(cl) = 316.00 ± 15.80							
Instrument = MAP215-50	Scaling Ratio K/Ca = 0.430							
Lithology = Undefined	Abundance Ratio 40K/K = 1.1700 ± 0.0199 E-04	295.07 ± 2.88 ± 0.97%	0.22616 ± 0.10419 ± 46.07%	607.6 ± 279.9 ± 46.07%	1.35 24%	87.88 7		
Lat-Lon = Undefined - Undefined	Atomic Weight K = 39.0983 ± 0.0001 g			Full External Error ± 280.2	2.26	2σ Confidence Limit		
R1 ratio = Undefined	Recalibrated to FCT-3 Secondary Standard			Analytical Error ± 279.9	1.1628	Error Magnification		
R2 ratio = Undefined	Standard Age = 28.201 ± 0.023 Ma				4	Number of Iterations		
R3 ratio = Undefined					0.0000008188	Convergence		
R4 ratio = Undefined					2%	Spreading Factor		
R5 ratio = Undefined								
Collector Calibrations =								



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Degassing Patterns			36Ar(a) [V]	%1σ	36Ar(c) [V]	%1σ	36Ar(ca) [V]	%1σ	36Ar(cl) [V]	%1σ	37Ar(ca) [V]	%1σ	38Ar(a) [V]	%1σ	38Ar(c) [V]	%1σ	38Ar(k) [V]	%1σ	38Ar(ca) [V]	%1σ	38Ar(cl) [V]	%1σ	39Ar(k) [V]	%1σ	39Ar(ca) [V]	%1σ	40Ar(r) [V]	%1σ	40Ar(a) [V]	%1σ	40Ar(c) [V]	%1σ	40Ar(k) [V]	%1σ	
	13C2140	500 °C	✓	0.0023597	1.07	0.0000000	0.00	0.0000020	5.90	0.0000002	6.16	0.0073972	5.90	0.0004410	1.07	0.0000000	0.00	0.0002329	0.31	0.0000010	5.90	0.0009026	8.18	0.0204653	0.31	0.0000050	5.90	0.0124986	60.18	0.697293	1.07	0.0000000	0.00	0.0000207	0.31
	13C2142	600 °C	✓	0.0051358	0.38	0.0000000	0.00	0.0000106	2.46	0.0000007	5.50	0.0402875	2.46	0.0009599	0.38	0.0000000	0.00	0.0010061	0.14	0.0000056	2.46	0.0032424	7.70	0.0884058	0.14	0.0000271	2.46	0.0087948	66.05	1.517621	0.38	0.0000000	0.00	0.0000893	0.14
	13C2143	700 °C	✓	0.0036891	0.54	0.0000000	0.00	0.0000166	2.36	0.0000005	5.65	0.0630550	2.36	0.0006895	0.54	0.0000000	0.00	0.0012393	0.17	0.0000088	2.36	0.0023263	7.80	0.1089006	0.17	0.0000424	2.36	0.0195893	30.09	1.090120	0.54	0.0000000	0.00	0.0001100	0.17
	13C2145	800 °C	✓	0.0031319	0.49	0.0000000	0.00	0.0000215	2.33	0.0000004	5.66	0.0812798	2.33	0.0005854	0.49	0.0000000	0.00	0.0015021	0.13	0.0000113	2.33	0.0015899	7.81	0.1319963	0.13	0.0000547	2.33	0.0325666	14.15	0.925486	0.49	0.0000000	0.00	0.0001333	0.13
	13C2146	900 °C	✓	0.0022355	0.82	0.0000000	0.00	0.0000153	2.38	0.0000001	7.62	0.0581027	2.38	0.0004178	0.82	0.0000000	0.00	0.0010269	0.11	0.0000081	2.38	0.0006158	9.33	0.0902362	0.11	0.0000391	2.38	0.0186371	29.03	0.660598	0.82	0.0000000	0.00	0.0000911	0.11
	13C2148	1050 °C	✓	0.0055257	0.37	0.0000000	0.00	0.0000272	2.31	0.0000002	6.00	0.1029696	2.31	0.0010328	0.37	0.0000000	0.00	0.0015325	0.11	0.0000143	2.31	0.0010868	8.07	0.1346617	0.11	0.0000693	2.31	0.0226940	26.58	1.632844	0.37	0.0000000	0.00	0.0001360	0.11
	13C2149	1250 °C	✓	0.0143987	0.20	0.0000000	0.00	0.0000706	2.34	0.0000005	5.58	0.2675053	2.34	0.0026911	0.20	0.0000000	0.00	0.0028740	0.04	0.0000372	2.34	0.0022006	7.76	0.2525444	0.04	0.0001800	2.34	0.0597647	14.71	4.254820	0.20	0.0000000	0.00	0.0002551	0.04
	13C2151	1400 °C		0.0051756	0.41	0.0000000	0.00	0.0000359	2.31	0.0000002	7.55	0.1359157	2.31	0.0009673	0.41	0.0000000	0.00	0.0012985	0.16	0.0000189	2.31	0.0007940	9.27	0.1141005	0.16	0.0000915	2.31	0.0208530	30.43	1.529404	0.41	0.0000000	0.00	0.0001152	0.16
		Σ		0.0416521	0.15	0.0000000	0.00	0.0001997	1.05	0.0000029	2.29	0.7565128	1.05	0.0077848	0.15	0.0000000	0.00	0.0107121	0.04	0.0001052	1.05	0.0127583	3.15	0.9413108	0.04	0.0005091	1.05	0.1536922	11.81	12.308187	0.15	0.0000000	0.00	0.0009507	0.04
		Σ									0.0418546	0.14	0.7565128	1.05								0.0313604	1.28			0.9418199	0.04							12.462829	0.20



Additional Parameters			40Ar/39Ar	1σ	37Ar/39Ar	1σ	36Ar/39Ar	1σ	Time (days)	37Ar (decay)	39Ar (decay)	40Ar (moles)
13C2140	500 °C	✓	34.675276	0.116956	0.361365	0.021348	0.115380	0.001283	115.658	9.844879	1.00081730	1.420E-13
13C2142	600 °C	✓	17.261718	0.025968	0.455571	0.011205	0.058204	0.000233	115.693	9.851633	1.00081755	3.053E-13
13C2143	700 °C	✓	10.187154	0.019265	0.578789	0.013689	0.034020	0.000191	115.711	9.855147	1.00081767	2.220E-13
13C2145	800 °C	✓	7.256181	0.011803	0.615519	0.014344	0.023883	0.000120	115.748	9.862314	1.00081793	1.916E-13
13C2146	900 °C	✓	7.525054	0.009140	0.643616	0.015312	0.024935	0.000204	115.767	9.866103	1.00081807	1.359E-13
13C2148	1050 °C	✓	12.288740	0.014305	0.764261	0.017685	0.041216	0.000158	115.803	9.873142	1.00081833	3.311E-13
13C2149	1250 °C	✓	17.073299	0.009692	1.058486	0.024791	0.057255	0.000117	115.821	9.876529	1.00081845	8.630E-13
13C2151	1400 °C		13.211673	0.023762	1.190239	0.027578	0.045640	0.000198	115.856	9.883304	1.00081869	3.017E-13



Procedure Blanks		36Ar [V]	1σ	37Ar [V]	1σ	38Ar [V]	1σ	39Ar [V]	1σ	40Ar [V]	1σ
13C2140	500 °C	0.0002718	0.0000209	0.0000266	0.0000111	0.0000194	0.0000154	0.0000020	0.0000209	0.0006895	0.0000511
13C2142	600 °C	0.0003561	0.0000063	0.0000168	0.0000250	0.0000231	0.0000174	0.0000561	0.0000181	0.0092833	0.0000333
13C2143	700 °C	0.0003561	0.0000063	0.0000168	0.0000250	0.0000231	0.0000174	0.0000561	0.0000181	0.0092833	0.0000333
13C2145	800 °C	0.0003561	0.0000063	0.0000168	0.0000250	0.0000231	0.0000174	0.0000561	0.0000181	0.0092833	0.0000333
13C2146	900 °C	0.0003561	0.0000063	0.0000168	0.0000250	0.0000231	0.0000174	0.0000561	0.0000181	0.0092833	0.0000333
13C2148	1050 °C	0.0003561	0.0000086	0.0000977	0.0000199	0.0000373	0.0000205	0.0000958	0.0000240	0.0064841	0.0000513
13C2149	1250 °C	0.0003001	0.0000086	0.0000977	0.0000199	0.0000373	0.0000205	0.0000958	0.0000240	0.0064841	0.0000513
13C2151	1400 °C	0.0003001	0.0000086	0.0000977	0.0000199	0.0000373	0.0000205	0.0000958	0.0000240	0.0064841	0.0000513



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Intercept Values		36Ar [V]	1σ	r2		37Ar [V]	1σ	r2		38Ar [V]	1σ	r2		39Ar [V]	1σ	r2		40Ar [V]	1σ	r2		
	13C2140	500 °C	0.0027243	0.0000158	0.9728	LIN # 2 4 6	0.0007998	0.0000406	0.1563	LIN # 5 7	0.0016283	0.0000222	0.8627	LIN #	0.0206683	0.0000602	0.5160	EXP # 2 8	0.7114979	0.0009710	0.9971	EXP # 2 3
	13C2142	600 °C	0.0057010	0.0000191	0.9702	LIN # 1 1 1	0.0042253	0.0000280	0.8897	EXP #	0.0053410	0.0000331	0.9449	LIN #	0.0893622	0.0001209	0.9963	EXP # 2 3	1.5380952	0.0009547	0.9994	EXP # 2 3 4
	13C2143	700 °C	0.0042053	0.0000195	0.9540	LIN # 1 4 8	0.0066019	0.0000283	0.9728	EXP #	0.0043723	0.0000359	0.9320	LIN #	0.1100857	0.0001908	0.9951	EXP # 2	1.1208960	0.0008185	0.9989	EXP # 2 3
	13C2145	800 °C	0.0036320	0.0000145	0.9755	LIN #	0.0084999	0.0000252	0.9908	EXP #	0.0037860	0.0000222	0.9755	LIN # 6	0.1334375	0.0001761	0.9977	EXP #	0.9691165	0.0009016	0.9984	EXP # 2 3
	13C2146	900 °C	0.0026950	0.0000179	0.9690	LIN # 2 5 7	0.0060798	0.0000296	0.9744	EXP # 9	0.0021337	0.0000288	0.7426	LIN #	0.0912592	0.0000946	0.9991	EXP # 2 3	0.6899208	0.0004066	0.9995	EXP # 2 3 4
	13C2148	1050 °C	0.0061250	0.0000193	0.9923	LIN # 1 2 4 5 8	0.0108350	0.0000272	0.9916	EXP #	0.0037782	0.0000207	0.9546	LIN # 7	0.1362116	0.0001514	0.9978	EXP # 4	1.6653223	0.0004835	0.9999	EXP # 2 3 4 11
	13C2149	1250 °C	0.0153309	0.0000288	0.9938	EXP # 2	0.0279822	0.0001349	0.9643	EXP #	0.0079989	0.0000252	0.9597	LIN #	0.2554176	0.0000879	0.9997	EXP # 3 4 8 11	4.3295502	0.0019062	0.9994	EXP # 2 7
	13C2151	1400 °C	0.0057148	0.0000200	0.9862	LIN # 1 7	0.0142573	0.0000390	0.9946	LIN # 2 5	0.0031790	0.0000373	0.7740	LIN #	0.1154730	0.0001810	0.9947	EXP # 2	1.5181871	0.0012904	0.9989	EXP # 2 3 4



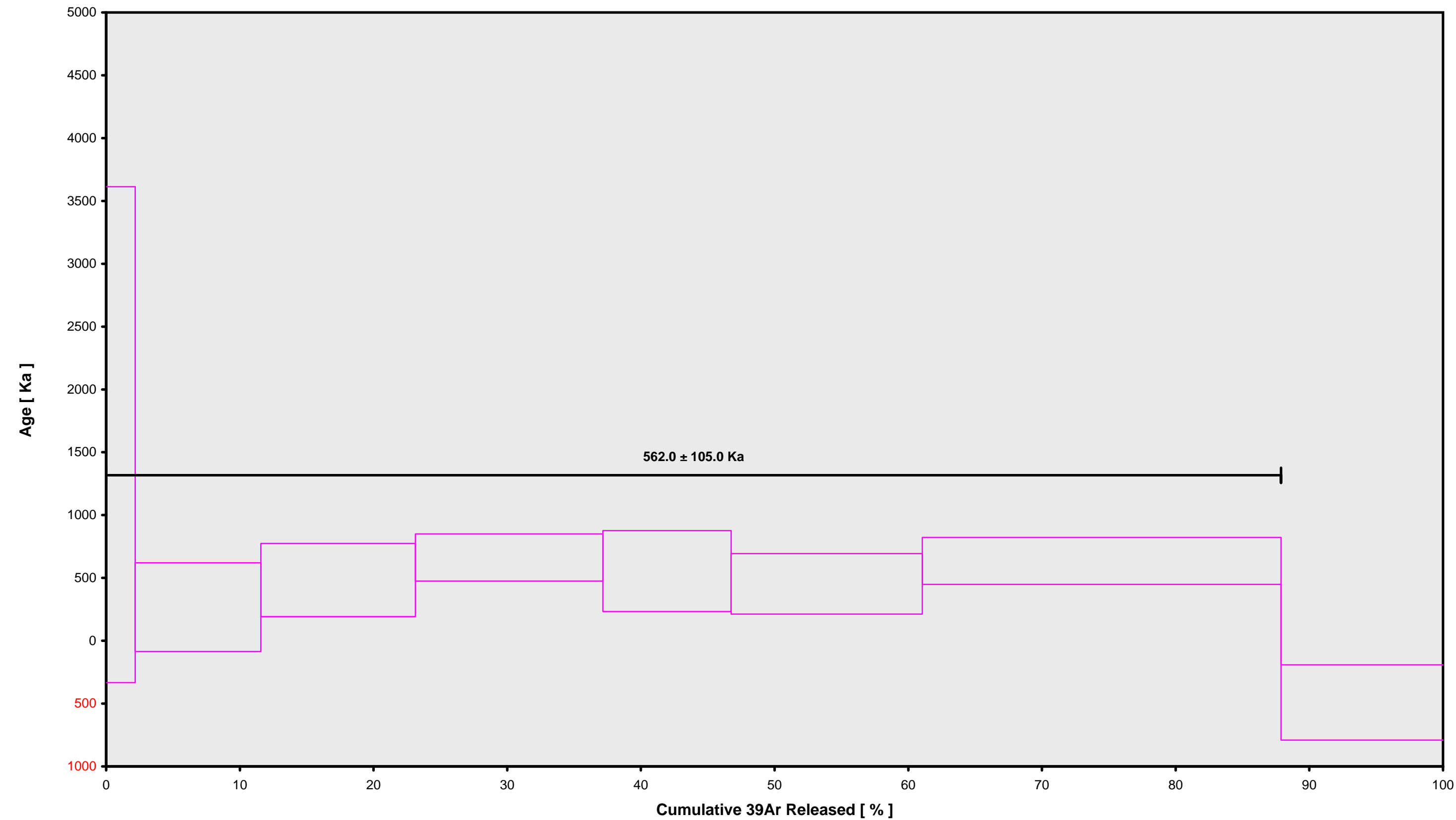
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Sample Parameters		Sample	Material	Location	Analyst	Temp	Standard Name	Standard (in Ma)	%1σ	Standard Reference	Standard 40Ar/39Ar	%1σ	J	%1σ	Air 40Ar/36Ar	%1σ	MDF	%1σ	Volume Ratio	Sensitivity (mol/volt)	Day	Month	Year	Hour	Min	Resist	Irradiation	X-pos	Y-pos	Z/H-pos	Project	Experiment	Nmb		
		13C2140	500 °C	1180051-2	Groundmass	Kerguelen Plateau	Trevor Smith	500	FCT-3	28.201	0.083	Kuiper et al., 2008			0.00148940	0.272			1.0092	0.001	0.9986	2E-13	30	JUL	2013	7	49	1	OSU2C13	0.00	0.00	57.00	Kerguelen	13C2140	01
		13C2142	600 °C	1180051-2	Groundmass	Kerguelen Plateau	Trevor Smith	600	FCT-3	28.201	0.083	Kuiper et al., 2008			0.00148940	0.272			1.0092	0.001	0.9985	2E-13	30	JUL	2013	8	39	1	OSU2C13	0.00	0.00	57.00	Kerguelen	13C2140	01
		13C2143	700 °C	1180051-2	Groundmass	Kerguelen Plateau	Trevor Smith	700	FCT-3	28.201	0.083	Kuiper et al., 2008			0.00148940	0.272			1.0092	0.001	0.9984	2E-13	30	JUL	2013	9	5	1	OSU2C13	0.00	0.00	57.00	Kerguelen	13C2140	01
		13C2145	800 °C	1180051-2	Groundmass	Kerguelen Plateau	Trevor Smith	800	FCT-3	28.201	0.083	Kuiper et al., 2008			0.00148940	0.272			1.0092	0.001	0.9983	2E-13	30	JUL	2013	9	58	1	OSU2C13	0.00	0.00	57.00	Kerguelen	13C2140	01
		13C2146	900 °C	1180051-2	Groundmass	Kerguelen Plateau	Trevor Smith	900	FCT-3	28.201	0.083	Kuiper et al., 2008			0.00148940	0.272			1.0092	0.001	0.9981	2E-13	30	JUL	2013	10	26	1	OSU2C13	0.00	0.00	57.00	Kerguelen	13C2140	01
		13C2148	1050 °C	1180051-2	Groundmass	Kerguelen Plateau	Trevor Smith	1050	FCT-3	28.201	0.083	Kuiper et al., 2008			0.00148940	0.272			1.0092	0.001	0.9981	2E-13	30	JUL	2013	11	18	1	OSU2C13	0.00	0.00	57.00	Kerguelen	13C2140	01
		13C2149	1250 °C	1180051-2	Groundmass	Kerguelen Plateau	Trevor Smith	1250	FCT-3	28.201	0.083	Kuiper et al., 2008			0.00148940	0.272			1.0092	0.001	0.9981	2E-13	30	JUL	2013	11	43	1	OSU2C13	0.00	0.00	57.00	Kerguelen	13C2140	01
		13C2151	1400 °C	1180051-2	Groundmass	Kerguelen Plateau	Trevor Smith	1400	FCT-3	28.201	0.083	Kuiper et al., 2008			0.00148940	0.272			1.0092	0.001	0.998	2E-13	30	JUL	2013	12	33	1	OSU2C13	0.00	0.00	57.00	Kerguelen	13C2140	01



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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
	13C2140	500 °C	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0	0	0	0	0
	13C2142	600 °C	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0	0	0	0	0
	13C2143	700 °C	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0	0	0	0	0
	13C2145	800 °C	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0	0	0	0	0
	13C2146	900 °C	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0	0	0	0	0
	13C2148	1050 °C	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0	0	0	0	0
	13C2149	1250 °C	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0	0	0	0	0
	13C2151	1400 °C	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0	0	0	0	0



13C2140.AGE >>> 1180051-2 >>> KERGUELEN PROJECT



Ar-Ages in Ka

WEIGHTED PLATEAU

562.0 ± 105.0

TOTAL FUSION

438.7 ± 103.6

NORMAL ISOCHRON

608.7 ± 329.0

INVERSE ISOCHRON

607.6 ± 279.9

MSWD (PROBABILITY)

1.15 (33%)

Sample Info

Groundmass

Kerguelen Plateau

Trevor Smith

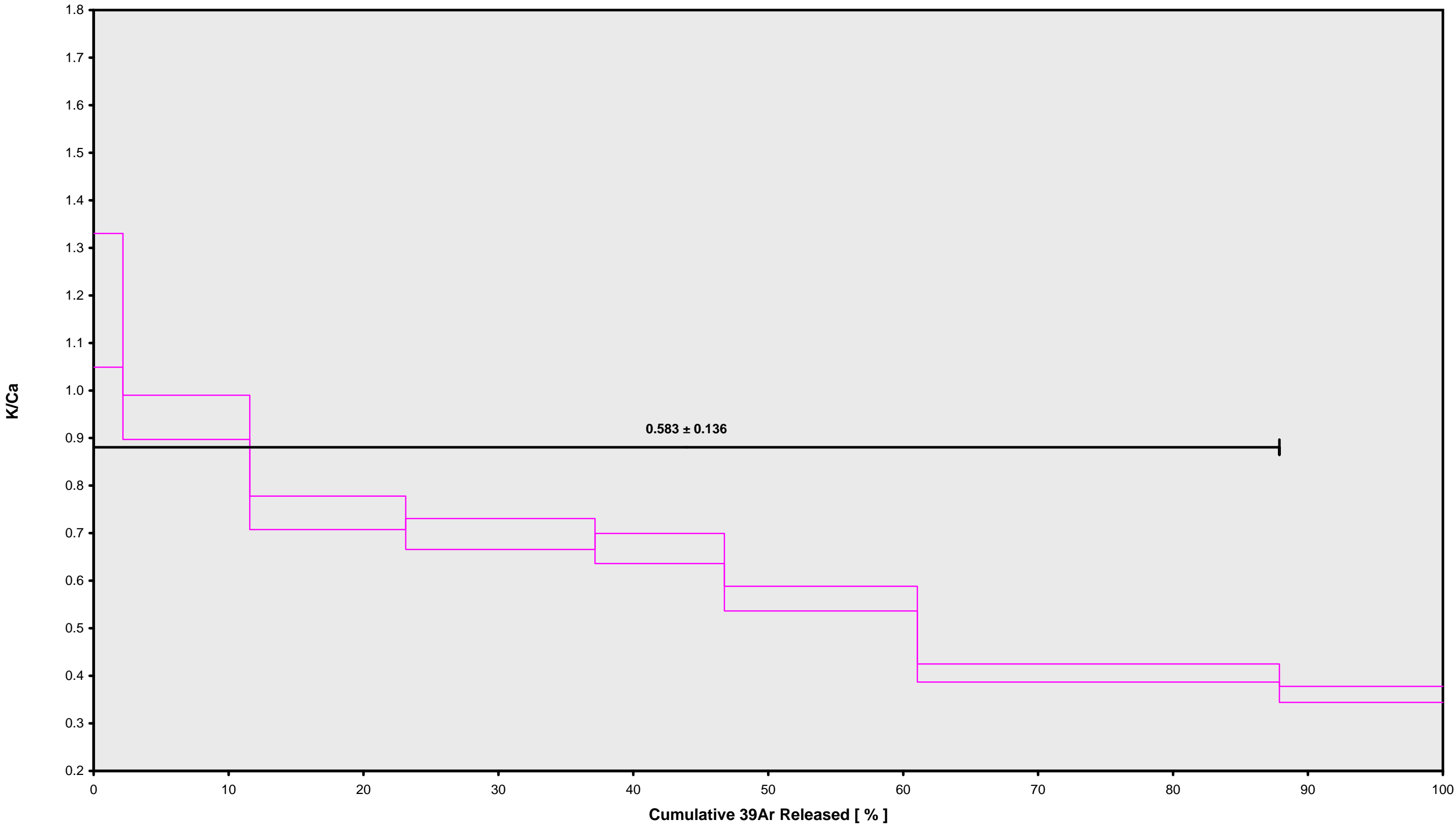
IRR = OSU2C13

J = 0.00148940 ± 0.00000405

RECALIBRATED AGE



13C2140.AGE >>> 1180051-2 >>> KERGUELEN PROJECT



**Ar-Ages in Ka**

**WEIGHTED PLATEAU**

$562.0 \pm 105.0$

**TOTAL FUSION**

$438.7 \pm 103.6$

**NORMAL ISOCHRON**

$608.7 \pm 329.0$

**INVERSE ISOCHRON**

$607.6 \pm 279.9$

**Sample Info**

**Groundmass**

**Kerguelen Plateau**

**Trevor Smith**

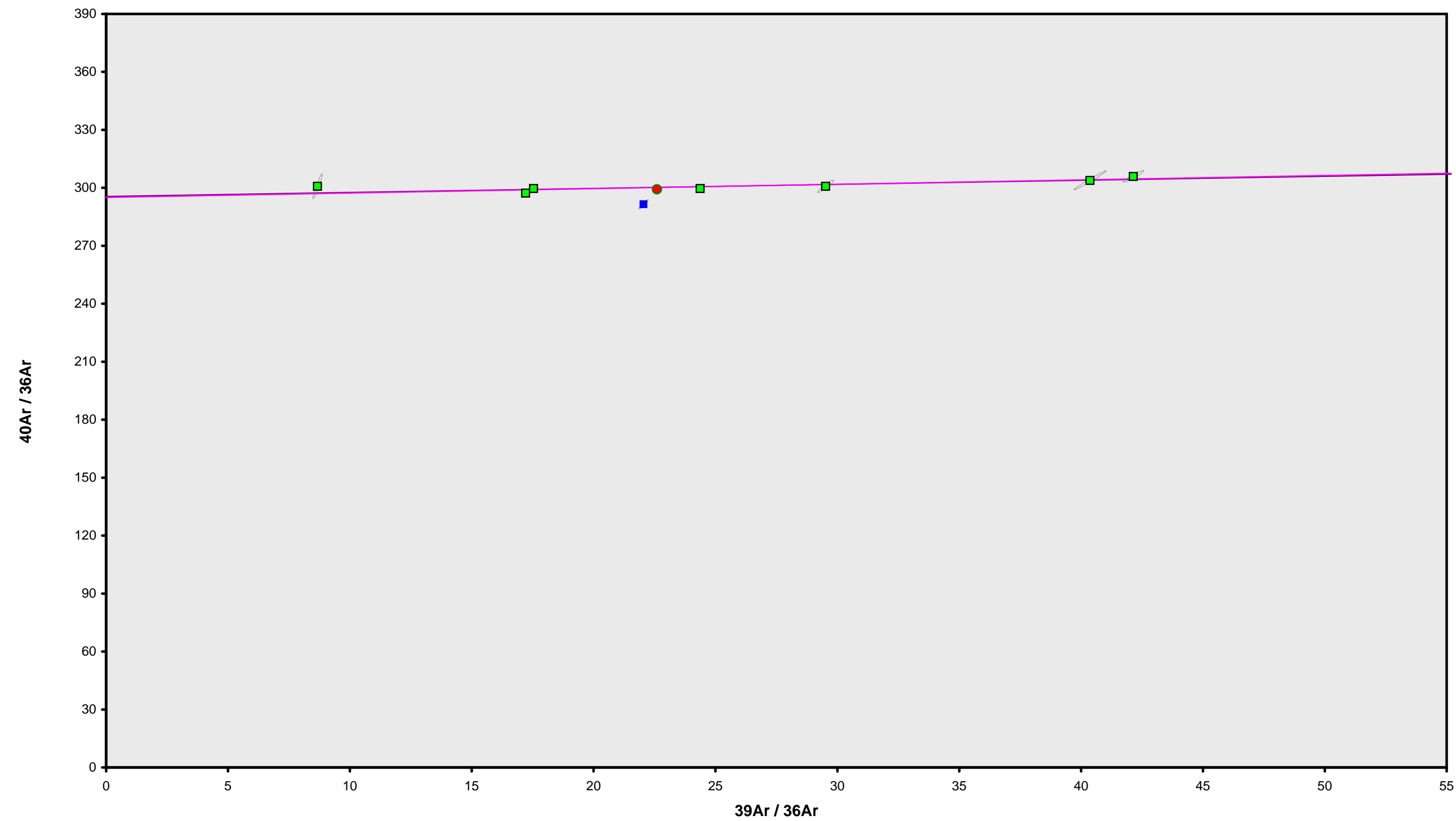
**IRR = OSU2C13**

**J =  $0.00148940 \pm 0.00000405$**

**RECALIBRATED AGE**



13C2140.AGE >>> 1180051-2 >>> KERGUELEN PROJECT



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562.0  $\pm$  105.0

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438.7  $\pm$  103.6

**NORMAL ISOCHRON**  
608.7  $\pm$  329.0

**INVERSE ISOCHRON**  
607.6  $\pm$  279.9

**MSWD (PROBABILITY)**  
1.35 (24%)

**40AR/36AR INTERCEPT**  
295.1  $\pm$  2.9

**Sample Info**

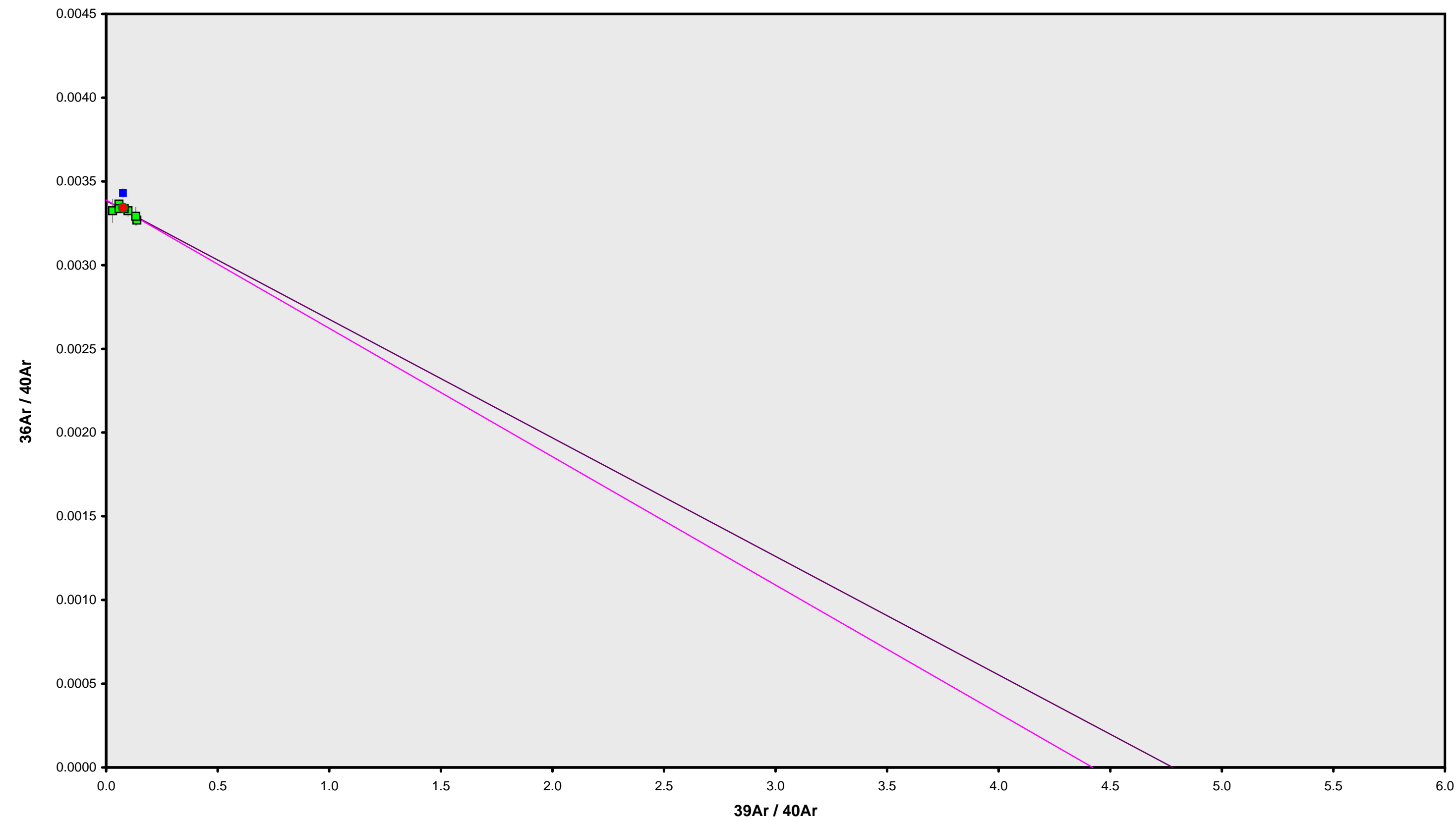
Groundmass  
Kerguelen Plateau  
Trevor Smith

IRR = OSU2C13  
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RECALIBRATED AGE



13C2140.AGE >>> 1180051-2 >>> KERGUELEN PROJECT



**Ar-Ages in Ka**

**WEIGHTED PLATEAU**  
562.0 ± 105.0

**TOTAL FUSION**  
438.7 ± 103.6

**NORMAL ISOCHRON**  
608.7 ± 329.0

**INVERSE ISOCHRON**  
607.6 ± 279.9

**MSWD (PROBABILITY)**  
1.35 (24%)

**SPREADING FACTOR**  
2.5%

**40AR/36AR INTERCEPT**  
295.1 ± 2.9

**Sample Info**

Groundmass  
Kerguelen Plateau  
Trevor Smith

IRR = OSU2C13  
J = 0.00148940 ± 0.00000405

**RECALIBRATED AGE**



Incremental Heating		36Ar(a) [V]	37Ar(ca) [V]	38Ar(cl) [V]	39Ar(k) [V]	40Ar(r) [V]	Age ± 2σ (Ma)	40Ar(r) (%)	39Ar(k) (%)	K/Ca ± 2σ
13C2127	500 °C	0.0011107	0.0059504	0.0000647	0.0076998	0.0281286	9.90 ± 4.01	7.89	0.73	0.56 ± 0.04
13C2129	600 °C	✓ 0.0025102	0.0321925	0.0000414	0.0368172	0.0704835	5.20 ± 0.64	8.68	3.51	0.49 ± 0.02
13C2130	700 °C	✓ 0.0012729	0.0674809	0.0001086	0.0827373	0.1711294	5.61 ± 0.36	31.26	7.89	0.53 ± 0.03
13C2132	800 °C	✓ 0.0006673	0.1244007	0.0000817	0.1831603	0.3667773	5.43 ± 0.19	65.02	17.47	0.63 ± 0.03
13C2133	900 °C	✓ 0.0002545	0.1155284	0.0000904	0.2112330	0.4229282	5.43 ± 0.16	84.87	20.15	0.79 ± 0.04
13C2135	1050 °C	✓ 0.0003354	0.1533263	0.0005036	0.2710604	0.5376452	5.38 ± 0.18	84.40	25.85	0.76 ± 0.04
13C2136	1250 °C	✓ 0.0003335	0.1519160	0.0006191	0.1821459	0.3586408	5.34 ± 0.27	78.41	17.37	0.52 ± 0.02
13C2138	1400 °C	✓ 0.0001113	0.0715603	0.0002610	0.0735777	0.1551340	5.72 ± 0.36	82.48	7.02	0.44 ± 0.02

	Σ	0.0065957	0.7223555	0.0017706	1.0484316	2.1108669				
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Information on Analysis	Results	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD	39Ar(k) (% ,n)	K/Ca ± 2σ
Sample = 1180042-1 Material = Groundmass Location = Kerguelen Plateau Analyst = Trevor Smith Project = KERGUELEN Mass Discrimination Law = LIN Irradiation = OSU2C13 J = 0.00150670 ± 0.00000405 FCT-3 = 28.201 ± 0.023 Ma	Age Plateau	2.00313 ± 0.03243	5.44 ± 0.09	0.81	99.27	0.55 ± 0.09
	Recalibrated	± 1.62%	± 1.70%	56%	7	
			Full External Error ± 0.15	2.15	2σ Confidence Limit	
			Analytical Error ± 0.09	1.0000	Error Magnification	
	Total Fusion Age	2.01336 ± 0.03578	5.46 ± 0.10		8	0.62 ± 0.01
	Recalibrated	± 1.78%	± 1.85%			
			Full External Error ± 0.16			
			Analytical Error ± 0.10			



Normal Isochron		39(k)/36(a) ± 2σ		40(a+r)/36(a) ± 2σ	r.i.
13C2127	500 °C		6.93 ± 0.25	320.83 ± 11.16	0.9679
13C2129	600 °C	✓	14.67 ± 0.17	323.58 ± 3.79	0.9281
13C2130	700 °C	✓	65.00 ± 1.91	429.94 ± 12.51	0.9914
13C2132	800 °C	✓	274.49 ± 17.74	845.17 ± 54.61	0.9998
13C2133	900 °C	✓	829.96 ± 134.95	1957.24 ± 318.21	0.9998
13C2135	1050 °C	✓	808.19 ± 147.50	1898.53 ± 346.43	0.9998
13C2136	1250 °C	✓	546.19 ± 101.65	1370.94 ± 255.11	0.9998
13C2138	1400 °C	✓	661.12 ± 196.10	1689.42 ± 501.07	0.9999

Results	40(a)/36(a) ± 2σ		40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD
Normal Isochron Recalibrated	294.99 ± 3.42		2.00062 ± 0.03488	5.43 ± 0.10	0.78
	± 1.16%		± 1.74%	± 1.82%	57%
			Full External Error ± 0.16		
			Analytical Error ± 0.09		
Statistics	2σ Confidence Limit	2.26	Convergence	0.000000019567	
	Error Magnification	1.0000	Number of Iterations	253	
	Number of Data Points	7	Calculated Line	Weighted York-2	



Inverse Isochron		39(k)/40(a+r) ± 2σ		36(a)/40(a+r) ± 2σ	r.i.
13C2127	500 °C		0.0216088 ± 0.0001949	0.00311695 ± 0.00010847	0.0042
13C2129	600 °C	✓	0.0453282 ± 0.0002022	0.00309043 ± 0.00003622	0.1728
13C2130	700 °C	✓	0.1511824 ± 0.0005785	0.00232590 ± 0.00006765	0.0056
13C2132	800 °C	✓	0.3247787 ± 0.0004655	0.00118319 ± 0.00007646	0.0102
13C2133	900 °C	✓	0.4240471 ± 0.0014617	0.00051092 ± 0.00008307	0.0046
13C2135	1050 °C	✓	0.4256911 ± 0.0016526	0.00052672 ± 0.00009611	0.0032
13C2136	1250 °C	✓	0.3984077 ± 0.0014990	0.00072943 ± 0.00013574	0.0022
13C2138	1400 °C	✓	0.3913268 ± 0.0015686	0.00059192 ± 0.00017556	0.0013

Results	40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD
Inverse Isochron	294.92 ± 3.42	2.00541 ± 0.03502	5.44 ± 0.10	0.95
Recalibrated	± 1.16%	± 1.75%	± 1.82%	45%
			Full External Error ± 0.16	
			Analytical Error ± 0.09	
Statistics	2σ Confidence Limit	2.26	Convergence	0.0000000071
	Error Magnification	1.0000	Number of Iterations	4
	Number of Data Points	7	Calculated Line	Weighted York-2
	Spreading Factor	76.3%		



OSU Argon Geochronology Lab																
Relative Abundances		40Ar [V]	1σ	39Ar [V]	1σ	38Ar [V]	1σ	37Ar [V]	1σ	36Ar [V]	1σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	40Ar(r) (%)	39Ar(k) (%)	K/Ca ± 2σ
13C2127	500 °C	0.3563360	0.0002043	0.0077038	0.0000344	0.0003607	0.0000287	0.0059504	0.0002129	0.0011122	0.0000193	3.65316 ± 1.48378	9.90 ± 4.01	7.89	0.73	0.56 ± 0.04
13C2129	600 °C	✓ 0.8122730	0.0012204	0.0368389	0.0000607	0.0009340	0.0000302	0.0321925	0.0007744	0.0025187	0.0000142	1.91442 ± 0.23773	5.20 ± 0.64	8.68	3.51	0.49 ± 0.02
13C2130	700 °C	✓ 0.5473517	0.0002166	0.0827827	0.0001549	0.0012974	0.0000224	0.0674809	0.0016179	0.0012907	0.0000185	2.06835 ± 0.13252	5.61 ± 0.36	31.26	7.89	0.53 ± 0.03
13C2132	800 °C	✓ 0.5641391	0.0002746	0.1832440	0.0000963	0.0023081	0.0000297	0.1244007	0.0028651	0.0007001	0.0000215	2.00249 ± 0.06965	5.43 ± 0.19	65.02	17.47	0.63 ± 0.03
13C2133	900 °C	✓ 0.4983491	0.0004003	0.2113108	0.0003221	0.0025579	0.0000211	0.1155284	0.0026624	0.0002850	0.0000207	2.00219 ± 0.05833	5.43 ± 0.16	84.87	20.15	0.79 ± 0.04
13C2135	1050 °C	✓ 0.6370275	0.0004825	0.2711636	0.0004844	0.0036723	0.0000443	0.1533263	0.0035376	0.0003760	0.0000306	1.98349 ± 0.06719	5.38 ± 0.18	84.40	25.85	0.76 ± 0.04
13C2136	1250 °C	✓ 0.4573687	0.0002853	0.1822481	0.0003233	0.0027754	0.0000526	0.1519160	0.0035795	0.0003737	0.0000310	1.96898 ± 0.10096	5.34 ± 0.27	78.41	17.37	0.52 ± 0.02
13C2138	1400 °C	✓ 0.1880954	0.0001157	0.0736258	0.0001403	0.0011291	0.0000393	0.0715603	0.0016960	0.0001302	0.0000165	2.10844 ± 0.13285	5.72 ± 0.36	82.48	7.02	0.44 ± 0.02

Σ		4.0609404	0.0014634	1.0489177	0.0007076	0.0150349	0.0000992	0.7223555	0.0068384	0.0067867	0.0000631					
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Information on Analysis and Constants Used in Calculations		Results						
Sample = 1180042-1		40(a)/36(a) ± 2σ						
Material = Groundmass		40(r)/39(k) ± 2σ						
Location = Kerguelen Plateau		Age ± 2σ (Ma)						
Analyst = Trevor Smith		MSWD						
Project = KERGUELEN		39Ar(k) (%.n)						
Mass Discrimination Law = LIN		K/Ca ± 2σ						
Irradiation = OSU2C13								
J = 0.00150670 ± 0.00000405								
FCT-3 = 28.201 ± 0.023 Ma								
IGSN = Undefined								
Preferred Age = Undefined								
Classification = Undefined								
Experiment Type = Undefined								
Extraction Method = Undefined								
Heating = 0 sec								
Isolation = 15.00 min								
Instrument = MAP215-50								
Lithology = Undefined								
Lat-Lon = Undefined - Undefined								
R1 ratio = Undefined								
R2 ratio = Undefined								
R3 ratio = Undefined								
R4 ratio = Undefined								
R5 ratio = Undefined								
Collector Calibrations =								

Age Equations = Min et al. (2000)		Age Plateau						
Negative Intensities = Allowed		Recalibrated						
Decay Constant 40K = 5.543 ± 0.044 E-10 1/a		2.00313 ± 0.03243						
Decay Constant 39Ar = 2.940 ± 0.029 E-07 1/h		5.44 ± 0.09						
Decay Constant 37Ar = 8.230 ± 0.082 E-04 1/h		± 1.62%						
Decay Constant 36Cl = 2.236 ± 0.045 E-06 1/a		Full External Error ± 0.15						
Decay Constant 40K(EC,β <sup>+</sup> ) = 0.580 ± 0.009 E-10 1/a		Analytical Error ± 0.09						
Decay Constant 40K(β <sup>-</sup> ) = 4.950 ± 0.043 E-10 1/a		1.0000						
Atmospheric Ratio 40/36(a) = 295.50		Total Fusion Age						
Atmospheric Ratio 38/36(a) = 0.1869		Recalibrated						
Production Ratio 39/37(ca) = 0.000673		2.01336 ± 0.03578						
Production Ratio 38/37(ca) = 0.000139		5.46 ± 0.10						
Production Ratio 36/37(ca) = 0.000264		± 1.78%						
Production Ratio 40/39(k) = 0.001010		Full External Error ± 0.16						
Production Ratio 38/39(k) = 0.011380		Analytical Error ± 0.10						
Production Ratio 36/38(cl) = 316.00 ± 15.80		Normal Isochron						
Scaling Ratio K/Ca = 0.430		Recalibrated						
Abundance Ratio 40K/K = 1.1700 ± 0.0199 E-04		294.99 ± 3.42						
Atomic Weight K = 39.0983 ± 0.0001 g		± 1.16%						
Recalibrated to FCT-3 Secondary Standard		2.00062 ± 0.03488						
Standard Age = 28.201 ± 0.023 Ma		5.43 ± 0.10						
		± 1.82%						
		Full External Error ± 0.16						
		Analytical Error ± 0.09						
		0.0000000196						
		Inverse Isochron						
		Recalibrated						
		294.92 ± 3.42						
		± 1.16%						
		2.00541 ± 0.03502						
		5.44 ± 0.10						
		± 1.75%						
		Full External Error ± 0.16						
		Analytical Error ± 0.09						
		0.0000000071						
		45%						
		2.26						
		1.0000						
		253						
		Number of Iterations						
		Convergence						
		Spreading Factor						



OSU Argon Geochronology Lab																																		
Degassing Patterns		36Ar(a) [V]	%1σ	36Ar(c) [V]	%1σ	36Ar(ca) [V]	%1σ	36Ar(cl) [V]	%1σ	37Ar(ca) [V]	%1σ	38Ar(a) [V]	%1σ	38Ar(c) [V]	%1σ	38Ar(k) [V]	%1σ	38Ar(ca) [V]	%1σ	38Ar(cl) [V]	%1σ	39Ar(k) [V]	%1σ	39Ar(ca) [V]	%1σ	40Ar(r) [V]	%1σ	40Ar(a) [V]	%1σ	40Ar(c) [V]	%1σ	40Ar(k) [V]	%1σ	
	13C2127	500 °C	0.0011107	1.74	0.0000000	0.00	0.0000016	3.58	0.0000000	45.12	0.0059504	3.58	0.0002076	1.74	0.0000000	0.00	0.0000876	0.45	0.0000008	3.58	0.0000647	45.44	0.0076998	0.45	0.0000040	3.58	0.0281286	20.30	0.3281996	1.74	0.0000000	0.00	0.0000078	0.45
	13C2129	600 °C	✓ 0.0025102	0.57	0.0000000	0.00	0.0000085	2.41	0.0000000	73.50	0.0321925	2.41	0.0004691	0.57	0.0000000	0.00	0.0004190	0.16	0.0000045	2.41	0.0000414	73.69	0.0368172	0.16	0.0000217	2.41	0.0704835	6.21	0.7417523	0.57	0.0000000	0.00	0.0000372	0.16
	13C2130	700 °C	✓ 0.0012729	1.45	0.0000000	0.00	0.0000178	2.40	0.0000000	21.65	0.0674809	2.40	0.0002379	1.45	0.0000000	0.00	0.0009416	0.19	0.0000094	2.40	0.0001086	22.31	0.0827373	0.19	0.0000454	2.40	0.1711294	3.20	0.3761387	1.45	0.0000000	0.00	0.0000836	0.19
	13C2132	800 °C	✓ 0.0006673	3.23	0.0000000	0.00	0.0000328	2.30	0.0000000	37.04	0.1244007	2.30	0.0001247	3.23	0.0000000	0.00	0.0020844	0.05	0.0000173	2.30	0.0000817	37.43	0.1831603	0.05	0.0000837	2.30	0.3667773	1.74	0.1971768	3.23	0.0000000	0.00	0.0001850	0.05
	13C2133	900 °C	✓ 0.0002545	8.13	0.0000000	0.00	0.0000305	2.30	0.0000000	24.70	0.1155284	2.30	0.0000476	8.13	0.0000000	0.00	0.0024038	0.15	0.0000161	2.30	0.0000904	25.28	0.2112330	0.15	0.0000778	2.30	0.4229282	1.45	0.0752076	8.13	0.0000000	0.00	0.0002133	0.15
	13C2135	1050 °C	✓ 0.0003354	9.12	0.0000000	0.00	0.0000405	2.31	0.0000001	10.44	0.1533263	2.31	0.0000627	9.12	0.0000000	0.00	0.0030847	0.18	0.0000213	2.31	0.0005036	11.75	0.2710604	0.18	0.0001032	2.31	0.5376452	1.68	0.0991085	9.12	0.0000000	0.00	0.0002738	0.18
	13C2136	1250 °C	✓ 0.0003335	9.30	0.0000000	0.00	0.0000401	2.36	0.0000001	10.12	0.1519160	2.36	0.0000623	9.30	0.0000000	0.00	0.0020728	0.18	0.0000211	2.36	0.0006191	11.46	0.1821459	0.18	0.0001022	2.36	0.3586408	2.56	0.0985440	9.30	0.0000000	0.00	0.0001840	0.18
	13C2138	1400 °C	✓ 0.0001113	14.83	0.0000000	0.00	0.0000189	2.37	0.0000001	16.06	0.0715603	2.37	0.0000208	14.83	0.0000000	0.00	0.0008373	0.19	0.0000099	2.37	0.0002610	16.94	0.0735777	0.19	0.0000482	2.37	0.1551340	3.14	0.0328871	14.83	0.0000000	0.00	0.0000743	0.19
		Σ	0.0065957	0.96	0.0000000	0.00	0.0001907	0.95	0.0000004	6.24	0.7223555	0.95	0.0012327	0.96	0.0000000	0.00	0.0119312	0.07	0.0001004	0.95	0.0017706	6.76	1.0484316	0.07	0.0004861	0.95	2.1108669	0.89	1.9490146	0.96	0.0000000	0.00	0.0010589	0.07
	Σ							0.0067867	0.93	0.7223555	0.95									0.0150349	0.80			1.0489177	0.07							4.0609404	0.65	



Additional Parameters			40Ar/39Ar	1σ	37Ar/39Ar	1σ	36Ar/39Ar	1σ	Time (days)	37Ar (decay)	39Ar (decay)	40Ar (moles)
13C2127	500 °C		46.254493	0.208479	0.772394	0.027844	0.144376	0.002589	114.881	9.694924	1.00081181	7.127E-14
13C2129	600 °C	✓	22.049343	0.049159	0.873874	0.021071	0.068370	0.000402	114.917	9.701708	1.00081206	1.625E-13
13C2130	700 °C	✓	6.611906	0.012643	0.815156	0.019604	0.015592	0.000225	114.938	9.705835	1.00081222	1.095E-13
13C2132	800 °C	✓	3.078623	0.002205	0.678880	0.015640	0.003821	0.000118	114.975	9.712893	1.00081248	1.128E-13
13C2133	900 °C	✓	2.358371	0.004063	0.546723	0.012627	0.001349	0.000098	114.993	9.716358	1.00081260	9.967E-14
13C2135	1050 °C	✓	2.349237	0.004558	0.565438	0.013085	0.001387	0.000113	115.028	9.723157	1.00081285	1.274E-13
13C2136	1250 °C	✓	2.509593	0.004719	0.833567	0.019696	0.002051	0.000170	115.047	9.726625	1.00081298	9.147E-14
13C2138	1400 °C	✓	2.554747	0.005117	0.971946	0.023110	0.001769	0.000224	115.083	9.733565	1.00081324	3.762E-14



Procedure Blanks		36Ar [V]	1σ	37Ar [V]	1σ	38Ar [V]	1σ	39Ar [V]	1σ	40Ar [V]	1σ
13C2127	500 °C	0.0003395	0.0000128	0.0000016	0.0000041	0.0000129	0.0000064	0.0000329	0.0000205	0.0018178	0.0000481
13C2129	600 °C	0.0003701	0.0000100	0.0000083	0.0000107	0.0000000	0.0000148	0.0000543	0.0000191	0.0015842	0.0000319
13C2130	700 °C	0.0003701	0.0000100	0.0000083	0.0000107	0.0000000	0.0000148	0.0000543	0.0000191	0.0015842	0.0000319
13C2132	800 °C	0.0002941	0.0000109	0.0000136	0.0000226	0.0000568	0.0000135	0.0000728	0.0000145	0.0014793	0.0000192
13C2133	900 °C	0.0002941	0.0000109	0.0000136	0.0000226	0.0000568	0.0000135	0.0000728	0.0000145	0.0014793	0.0000192
13C2135	1050 °C	0.0002916	0.0000127	0.0000211	0.0000135	0.0000088	0.0000192	0.0000799	0.0000281	0.0013768	0.0000295
13C2136	1250 °C	0.0002916	0.0000127	0.0000211	0.0000135	0.0000088	0.0000192	0.0000799	0.0000281	0.0013768	0.0000295
13C2138	1400 °C	0.0003183	0.0000105	0.0000235	0.0000161	0.0000220	0.0000155	0.0001097	0.0000193	0.0018933	0.0000441



OSU Argon Geochronology Lab																					
Intercept Values		36Ar				37Ar				38Ar				39Ar				40Ar			
		[V]	1σ	r2		[V]	1σ	r2		[V]	1σ	r2		[V]	1σ	r2		[V]	1σ	r2	
13C2127	500 °C	0.0014855	0.0000151	0.8565	LIN #	0.0006294	0.0000168	0.0546	LIN # 6	0.0003535	0.0000285	0.1247	LIN #	0.0077989	0.0000279	0.9649	EXP #	0.3588356	0.0001990	0.9992	EXP # 1 9
13C2129	600 °C	0.0029645	0.0000102	0.9854	LIN # 5 7	0.0034023	0.0000244	0.8755	EXP #	0.0009489	0.0000269	0.0489	LIN #	0.0371900	0.0000570	0.9843	EXP #	0.8154065	0.0012223	0.9969	EXP # 2 3 8
13C2130	700 °C	0.0017000	0.0000161	0.8909	LIN # 3 5	0.0071196	0.0000529	0.9569	LIN # 2 8	0.0013181	0.0000173	0.9062	LIN # 3	0.0835039	0.0001529	0.9971	EXP # 3 6	0.5499809	0.0002147	0.9996	EXP # 1 2
13C2132	800 °C	0.0010155	0.0000193	0.0916	LIN # 7	0.0131124	0.0000410	0.9913	EXP #	0.0024014	0.0000269	0.8849	LIN #	0.1847743	0.0000784	0.9998	EXP # 1	0.5666384	0.0002745	0.9992	EXP # 1 8
13C2133	900 °C	0.0005881	0.0000183	0.6266	LIN # 1	0.0121739	0.0000381	0.9921	EXP #	0.0026552	0.0000166	0.9612	LIN # 5	0.2130643	0.0003180	0.9980	EXP #	0.5007298	0.0004006	0.9966	EXP # 1
13C2135	1050 °C	0.0006793	0.0000288	0.4085	LIN # 8 11	0.0161503	0.0000593	0.9863	EXP #	0.0037394	0.0000407	0.8751	LIN #	0.2734276	0.0004806	0.9972	EXP #	0.6396196	0.0004825	0.9974	EXP # 1
13C2136	1250 °C	0.0006770	0.0000293	0.4414	LIN #	0.0159962	0.0000961	0.9617	EXP #	0.0028282	0.0000498	0.6328	LIN # 4 9	0.1837959	0.0003200	0.9978	EXP # 1 7	0.4596188	0.0002843	0.9982	EXP # 1 4
13C2138	1400 °C	0.0004530	0.0000134	0.5739	LIN #	0.0075425	0.0000467	0.9703	EXP #	0.0011689	0.0000368	0.6552	LIN # 2	0.0743212	0.0001384	0.9967	EXP #	0.1903313	0.0001071	0.9957	EXP # 1



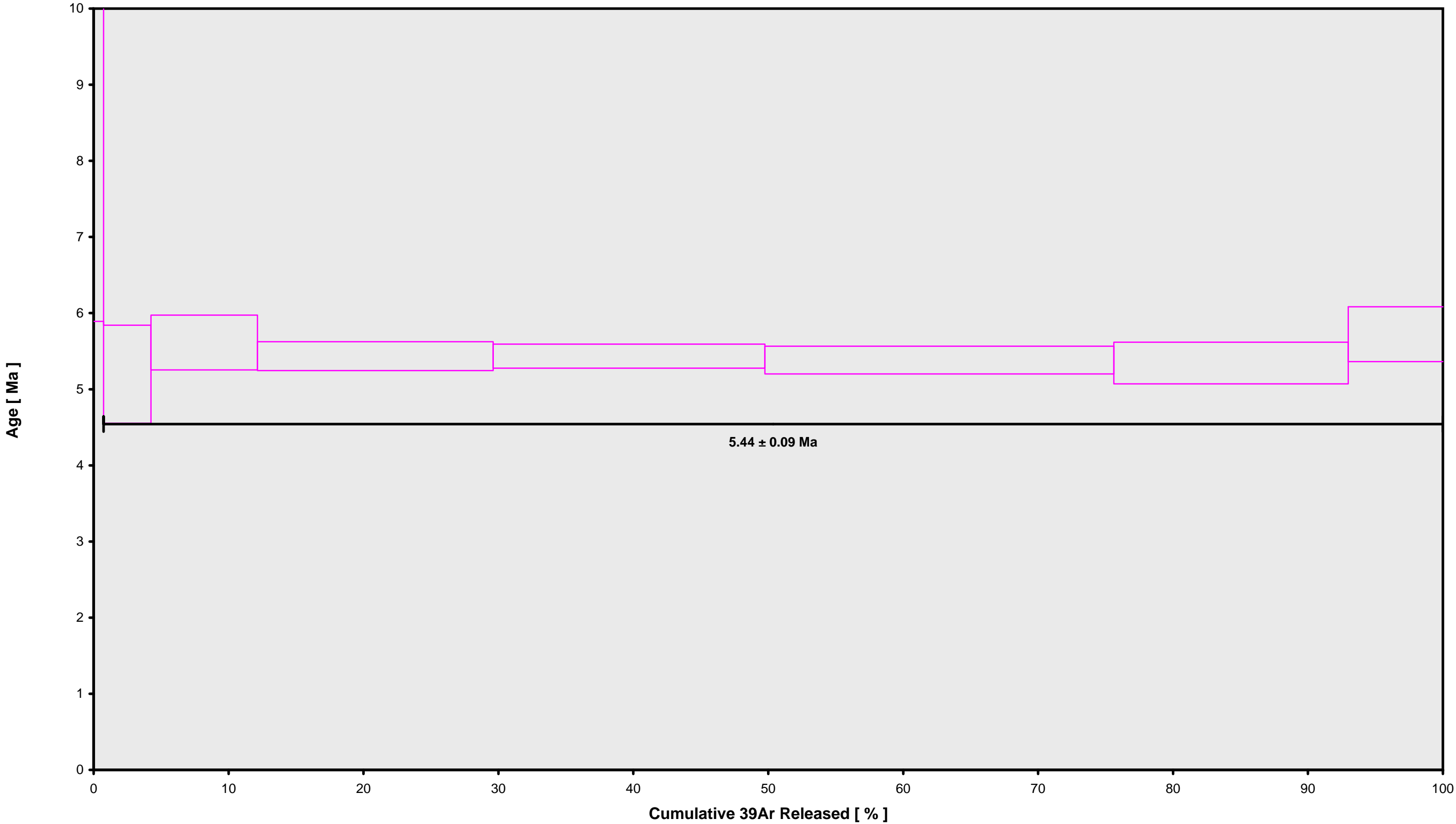
OSU Argon Geochronology Lab																																		
Sample Parameters			Sample	Material	Location	Analyst	Temp	Standard Name	Standard (in Ma)	%1σ	Standard Reference	Standard 40Ar/39Ar	%1σ	J	%1σ	Air 40Ar/36Ar	%1σ	MDF	%1σ	Volume Ratio	Sensitivity (mol/volt)	Day	Month	Year	Hour	Min	Resist	Irradiation	X-pos	Y-pos	Z/H-pos	Project	Experiment	Nmb
	13C2127	500 °C	1180042-1	Groundmass	Kerguelen Plateau	Trevor Smith	500	FCT-3	28.201	0.083	Kuiper et al., 2008			0.00150670	0.269			1.00697	0.030	0.9981	2E-13	29	JUL	2013	13	10	1	OSU2C13	0.00	0.00	53.90	Kerguelen	13C2127	01
	13C2129	600 °C	1180042-1	Groundmass	Kerguelen Plateau	Trevor Smith	600	FCT-3	28.201	0.083	Kuiper et al., 2008			0.00150670	0.269			1.00697	0.030	0.9981	2E-13	29	JUL	2013	14	1	1	OSU2C13	0.00	0.00	53.90	Kerguelen	13C2127	01
	13C2130	700 °C	1180042-1	Groundmass	Kerguelen Plateau	Trevor Smith	700	FCT-3	28.201	0.083	Kuiper et al., 2008			0.00150670	0.269			1.00697	0.030	0.9981	2E-13	29	JUL	2013	14	32	1	OSU2C13	0.00	0.00	53.90	Kerguelen	13C2127	01
	13C2132	800 °C	1180042-1	Groundmass	Kerguelen Plateau	Trevor Smith	800	FCT-3	28.201	0.083	Kuiper et al., 2008			0.00150670	0.269			1.00697	0.030	0.9982	2E-13	29	JUL	2013	15	25	1	OSU2C13	0.00	0.00	53.90	Kerguelen	13C2127	01
	13C2133	900 °C	1180042-1	Groundmass	Kerguelen Plateau	Trevor Smith	900	FCT-3	28.201	0.083	Kuiper et al., 2008			0.00150670	0.269			1.00697	0.030	0.9982	2E-13	29	JUL	2013	15	51	1	OSU2C13	0.00	0.00	53.90	Kerguelen	13C2127	01
	13C2135	1050 °C	1180042-1	Groundmass	Kerguelen Plateau	Trevor Smith	1050	FCT-3	28.201	0.083	Kuiper et al., 2008			0.00150670	0.269			1.00697	0.030	0.9981	2E-13	29	JUL	2013	16	42	1	OSU2C13	0.00	0.00	53.90	Kerguelen	13C2127	01
	13C2136	1250 °C	1180042-1	Groundmass	Kerguelen Plateau	Trevor Smith	1250	FCT-3	28.201	0.083	Kuiper et al., 2008			0.00150670	0.269			1.00697	0.030	0.9981	2E-13	29	JUL	2013	17	8	1	OSU2C13	0.00	0.00	53.90	Kerguelen	13C2127	01
	13C2138	1400 °C	1180042-1	Groundmass	Kerguelen Plateau	Trevor Smith	1400	FCT-3	28.201	0.083	Kuiper et al., 2008			0.00150670	0.269			1.00697	0.030	0.9982	2E-13	29	JUL	2013	18	0	1	OSU2C13	0.00	0.00	53.90	Kerguelen	13C2127	01



Irradiation Constants		OSU Argon Geochronology Lab																										
		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	
13C2127	500 °C	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0	
13C2129	600 °C	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0	
13C2130	700 °C	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0	
13C2132	800 °C	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0	
13C2133	900 °C	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0	
13C2135	1050 °C	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0	
13C2136	1250 °C	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0	
13C2138	1400 °C	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0	



13C2127.AGE >>> 1180042-1 >>> KERGUELEN PROJECT



Ar-Ages in Ma

WEIGHTED PLATEAU

5.44 ± 0.09

TOTAL FUSION

5.46 ± 0.10

NORMAL ISOCHRON

5.43 ± 0.10

INVERSE ISOCHRON

5.44 ± 0.10

MSWD (PROBABILITY)

0.81 (56%)

Sample Info

Groundmass

Kerguelen Plateau

Trevor Smith

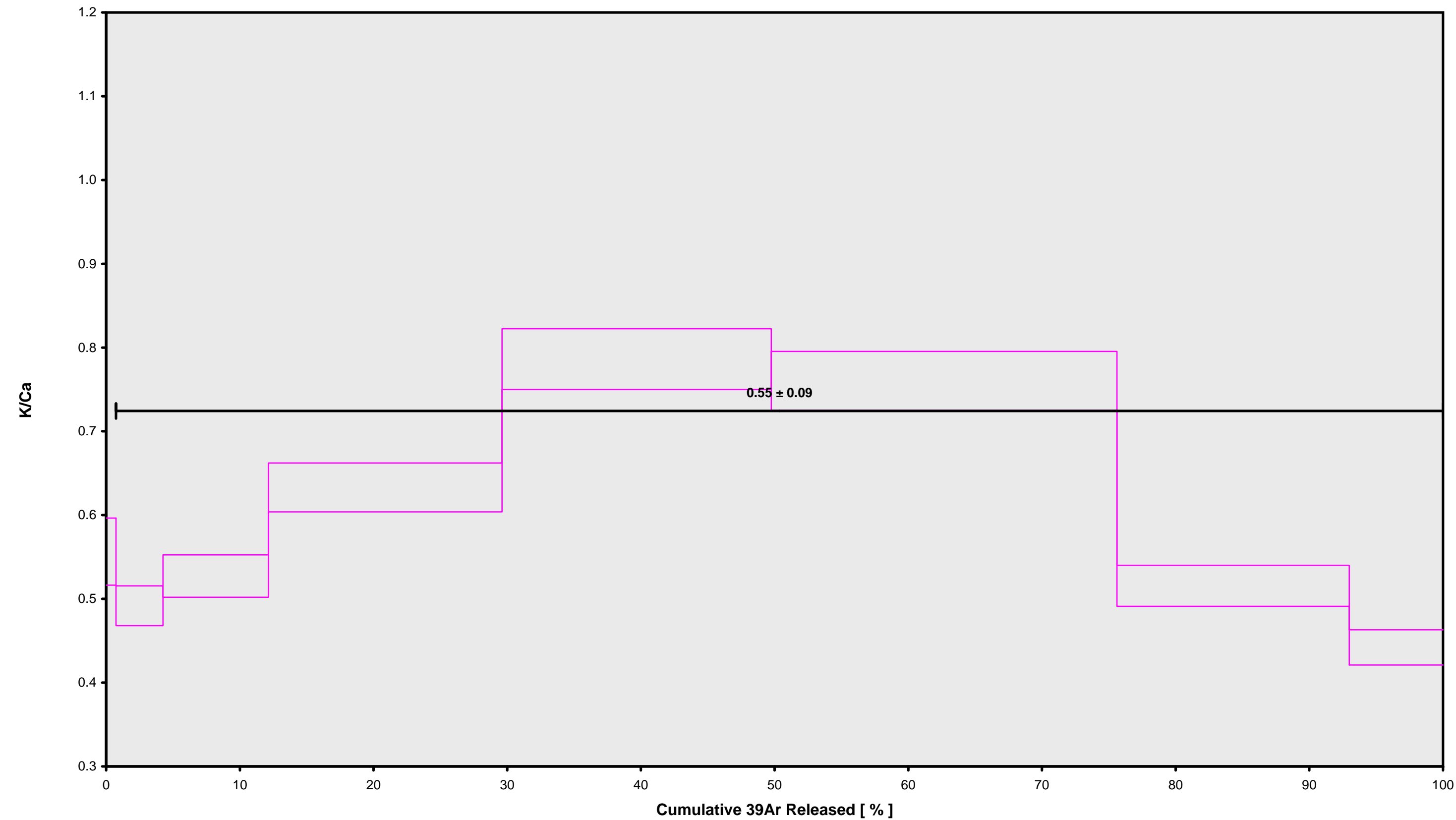
IRR = OSU2C13

J = 0.00150670 ± 0.00000405

RECALIBRATED AGE



13C2127.AGE >>> 1180042-1 >>> KERGUELEN PROJECT



**Ar-Ages in Ma**

**WEIGHTED PLATEAU**  
5.44  $\pm$  0.09

**TOTAL FUSION**  
5.46  $\pm$  0.10

**NORMAL ISOCHRON**  
5.43  $\pm$  0.10

**INVERSE ISOCHRON**  
5.44  $\pm$  0.10

**Sample Info**

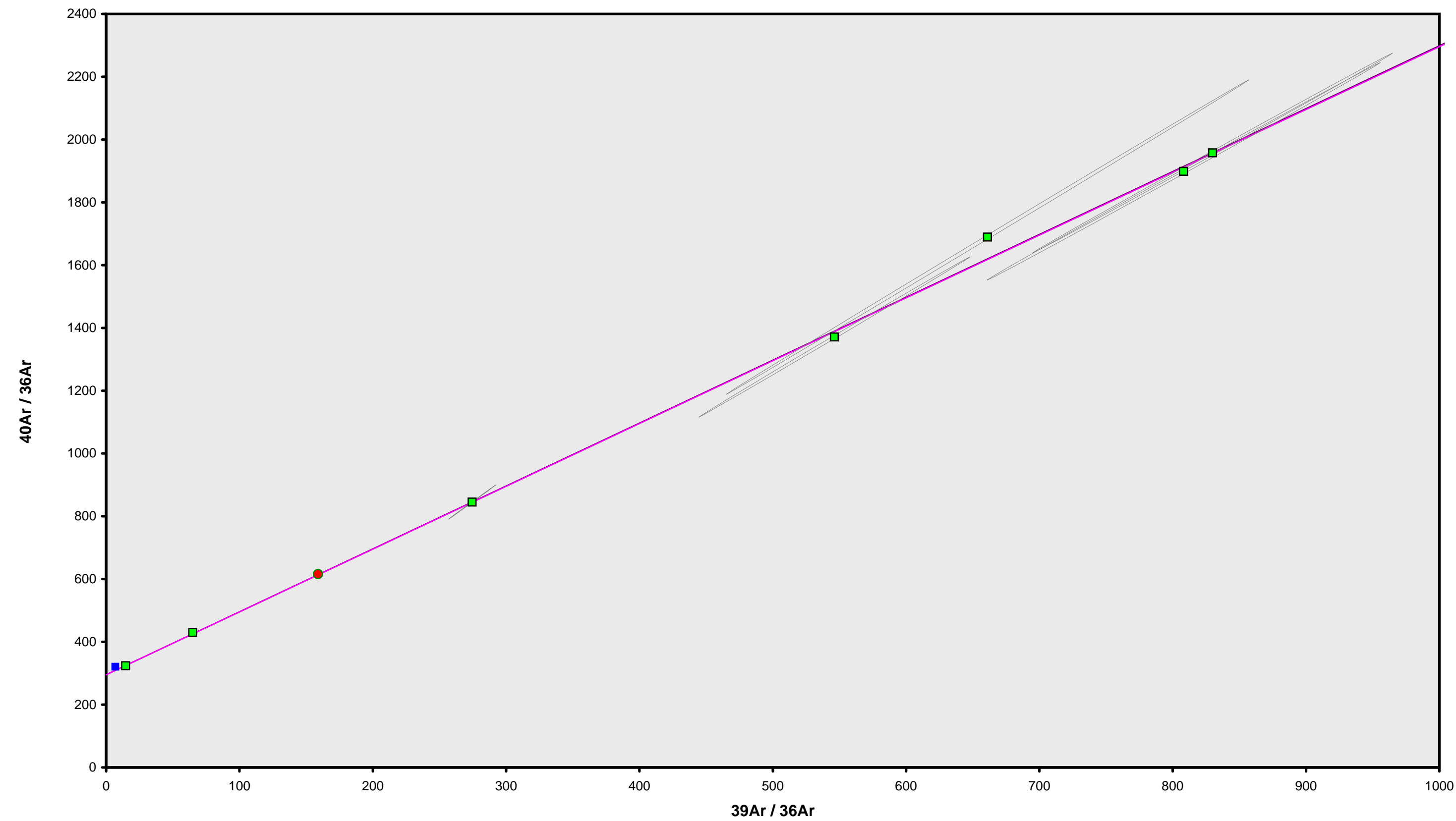
**Groundmass**  
**Kerguelen Plateau**  
**Trevor Smith**

**IRR = OSU2C13**  
**J = 0.00150670  $\pm$  0.00000405**

**RECALIBRATED AGE**



13C2127.AGE >>> 1180042-1 >>> KERGUELEN PROJECT



**Ar-Ages in Ma**

**WEIGHTED PLATEAU**  
5.44 ± 0.09

**TOTAL FUSION**  
5.46 ± 0.10

**NORMAL ISOCHRON**  
5.43 ± 0.10

**INVERSE ISOCHRON**  
5.44 ± 0.10

**MSWD (PROBABILITY)**  
0.78 (57%)

**40AR/36AR INTERCEPT**  
295.0 ± 3.4

**Sample Info**

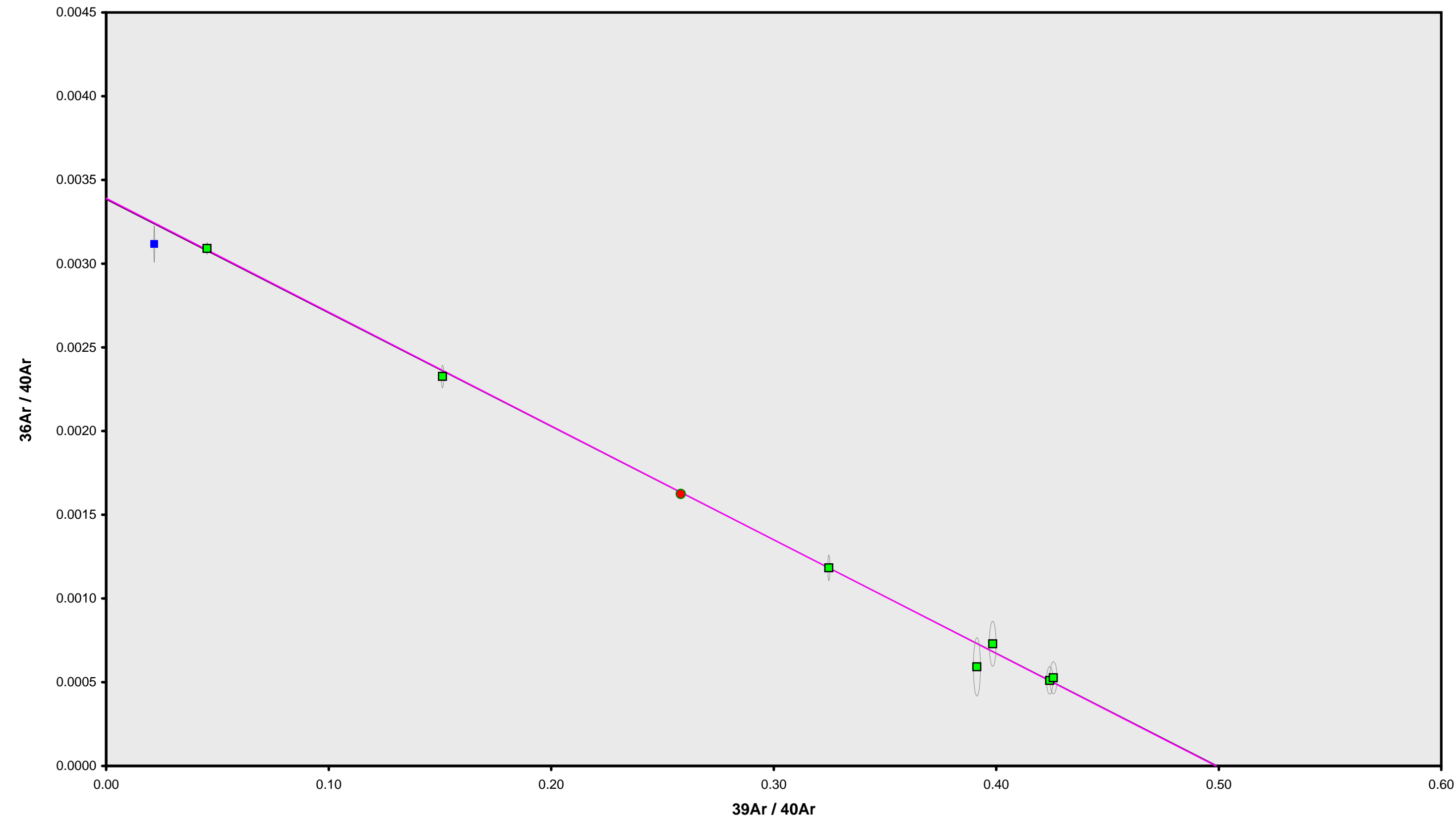
Groundmass  
Kerguelen Plateau  
Trevor Smith

IRR = OSU2C13  
J = 0.00150670 ± 0.00000405

**RECALIBRATED AGE**



13C2127.AGE >>> 1180042-1 >>> KERGUELEN PROJECT



Ar-Ages in Ma

WEIGHTED PLATEAU

5.44 ± 0.09

TOTAL FUSION

5.46 ± 0.10

NORMAL ISOCHRON

5.43 ± 0.10

INVERSE ISOCHRON

5.44 ± 0.10

MSWD (PROBABILITY)

0.95 (45%)

SPREADING FACTOR

76.3%

40AR/36AR INTERCEPT

294.9 ± 3.4

Sample Info

Groundmass

Kerguelen Plateau

Trevor Smith

IRR = OSU2C13

J = 0.00150670 ± 0.00000405

RECALIBRATED AGE



Incremental Heating			36Ar(a) [V]	37Ar(ca) [V]	38Ar(cl) [V]	39Ar(k) [V]	40Ar(r) [V]	Age ± 2σ (Ma)	40Ar(r) (%)	39Ar(k) (%)	K/Ca ± 2σ
13C2114	500 °C	✓	0.0010336	0.0042081	0.0000047	0.0028719	0.0173754	16.56 ± 17.76	5.38	0.51	0.293 ± 0.056
13C2116	600 °C	✓	0.0023463	0.0098100	0.0000539	0.0085463	0.0498939	15.98 ± 4.09	6.71	1.52	0.375 ± 0.031
13C2117	700 °C	✓	0.0017299	0.0177311	0.0000845	0.0172159	0.1148391	18.25 ± 2.51	18.34	3.05	0.418 ± 0.030
13C2119	800 °C	✓	0.0030378	0.0750281	0.0001936	0.0670451	0.4243760	17.32 ± 0.73	32.10	11.89	0.384 ± 0.018
13C2120	900 °C	✓	0.0019276	0.0985418	0.0002220	0.1174482	0.7465803	17.39 ± 0.51	56.72	20.83	0.513 ± 0.024
13C2122	1050 °C	✓	0.0008232	0.1377986	0.0004308	0.1872919	1.2105523	17.68 ± 0.21	83.26	33.21	0.584 ± 0.027
13C2123	1250 °C	✓	0.0003336	0.1590413	0.0005341	0.1265170	0.8013138	17.33 ± 0.35	89.03	22.44	0.342 ± 0.016
13C2125	1400 °C	✓	0.0000637	0.0613072	0.0001577	0.0369595	0.2393831	17.72 ± 1.29	92.70	6.55	0.259 ± 0.012
Σ			0.0112956	0.5634660	0.0016813	0.5638959	3.6043140				

Information on Analysis						
	Results	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD	39Ar(k) (%,n)	K/Ca ± 2σ
Sample = 1180011-2	<b>Age Plateau</b> <b>Recalibrated</b>	6.41870 ± 0.05962	17.56 ± 0.19	0.71	100.00	0.357 ± 0.074
Material = Groundmass		± 0.93%	± 1.06%	66%	8	
Location = Kerguelen Plateau			Full External Error ± 0.44	2.07	2σ Confidence Limit	
Analyst = Kyle Krawl		Analytical Error ± 0.16	1.0000	Error Magnification		
Project = KERGUELEN						
Mass Discrimination Law = LIN	<b>Total Fusion Age</b> <b>Recalibrated</b>	6.39181 ± 0.08619	17.49 ± 0.25		8	0.430 ± 0.009
Irradiation = OSU2C13		± 1.35%	± 1.44%			
J = 0.00152397 ± 0.00000405			Full External Error ± 0.47			
FCT-3 = 28.201 ± 0.023 Ma		Analytical Error ± 0.23				



Normal Isochron			39(k)/36(a) ± 2σ	40(a+r)/36(a) ± 2σ	r.i.
13C2114	500 °C	✓	2.78 ± 0.18	312.31 ± 19.12	0.9145
13C2116	600 °C	✓	3.64 ± 0.08	316.76 ± 5.84	0.8616
13C2117	700 °C	✓	9.95 ± 0.31	361.89 ± 11.22	0.9756
13C2119	800 °C	✓	22.07 ± 0.45	435.20 ± 8.72	0.9855
13C2120	900 °C	✓	60.93 ± 2.36	682.82 ± 26.51	0.9987
13C2122	1050 °C	✓	227.53 ± 12.98	1766.11 ± 100.73	0.9991
13C2123	1250 °C	✓	379.30 ± 61.32	2697.85 ± 436.09	0.9996
13C2125	1400 °C	✓	580.32 ± 538.05	4054.15 ± 3758.83	1.0000

Results	40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD
Normal Isochron Recalibrated	294.19 ± 3.76 ± 1.28%	6.41918 ± 0.06633 ± 1.03%	17.56 ± 0.20 ± 1.16%	0.78 58%
Full External Error ± 0.45 Analytical Error ± 0.18				
Statistics	2σ Confidence Limit Error Magnification Number of Data Points	2.15 1.0000 8	Convergence Number of Iterations Calculated Line	0.000000063131 375 Weighted York-2



Inverse Isochron		39(k)/40(a+r) ± 2σ		36(a)/40(a+r) ± 2σ	r.i.
13C2114	500 °C	✓	0.0088968 ± 0.0002386	0.00320194 ± 0.00019605	0.0225
13C2116	600 °C	✓	0.0114988 ± 0.0001221	0.00315692 ± 0.00005822	0.0408
13C2117	700 °C	✓	0.0275008 ± 0.0001908	0.00276330 ± 0.00008569	0.0293
13C2119	800 °C	✓	0.0507126 ± 0.0001742	0.00229781 ± 0.00004604	0.0169
13C2120	900 °C	✓	0.0892342 ± 0.0001796	0.00146452 ± 0.00005686	0.0319
13C2122	1050 °C	✓	0.1288294 ± 0.0003175	0.00056622 ± 0.00003230	0.0084
13C2123	1250 °C	✓	0.1405934 ± 0.0006134	0.00037067 ± 0.00005992	0.0087
13C2125	1400 °C	✓	0.1431413 ± 0.0005819	0.00024666 ± 0.00022869	0.0010

Results	40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD
Inverse Isochron Recalibrated	294.02 ± 3.77 ± 1.28%	6.43068 ± 0.06659 ± 1.04%	17.59 ± 0.20 ± 1.16%	0.72 63%
Full External Error ± 0.45 Analytical Error ± 0.18				
Statistics	2σ Confidence Limit	2.15	Convergence	0.0000004328
	Error Magnification	1.0000	Number of Iterations	3
	Number of Data Points	8	Calculated Line	Weighted York-2
	Spreading Factor	86.3%		



OSU Argon Geochronology Lab																	
Relative Abundances			40Ar		39Ar		38Ar		37Ar		36Ar		40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	40Ar(r) (%)	39Ar(k) (%)	K/Ca ± 2σ
			[V]	1σ	[V]	1σ	[V]	1σ	[V]	1σ	[V]	1σ					
13C2114	500 °C	✓	0.3228116	0.0009812	0.0028748	0.0000375	0.0002312	0.0000374	0.0042081	0.0003955	0.0010347	0.0000315	6.05002 ± 6.51743	16.56 ± 17.76	5.38	0.51	0.293 ± 0.056
13C2116	600 °C	✓	0.7432429	0.0010508	0.0085529	0.0000437	0.0005910	0.0000382	0.0098100	0.0003966	0.0023489	0.0000214	5.83806 ± 1.49998	15.98 ± 4.09	6.71	1.52	0.375 ± 0.031
13C2117	700 °C	✓	0.6260325	0.0007861	0.0172278	0.0000557	0.0006062	0.0000315	0.0177311	0.0006403	0.0017346	0.0000267	6.67053 ± 0.92326	18.25 ± 2.51	18.34	3.05	0.418 ± 0.030
13C2119	800 °C	✓	1.3221270	0.0007135	0.0670956	0.0001093	0.0015348	0.0000506	0.0750281	0.0017601	0.0030577	0.0000304	6.32971 ± 0.26954	17.32 ± 0.73	32.10	11.89	0.384 ± 0.018
13C2120	900 °C	✓	1.3162977	0.0010395	0.1175145	0.0000733	0.0019325	0.0000371	0.0985418	0.0022869	0.0019536	0.0000374	6.35668 ± 0.18913	17.39 ± 0.51	56.72	20.83	0.513 ± 0.024
13C2122	1050 °C	✓	1.4539864	0.0007880	0.1873846	0.0002072	0.0027352	0.0000459	0.1377986	0.0031591	0.0008596	0.0000235	6.46345 ± 0.07590	17.68 ± 0.21	83.26	33.21	0.584 ± 0.027
13C2123	1250 °C	✓	0.9000068	0.0011123	0.1266241	0.0002274	0.0020583	0.0000450	0.1590413	0.0036914	0.0003757	0.0000269	6.33364 ± 0.12916	17.33 ± 0.35	89.03	22.44	0.342 ± 0.016
13C2125	1400 °C	✓	0.2582404	0.0002476	0.0370008	0.0000662	0.0005987	0.0000302	0.0613072	0.0014151	0.0000799	0.0000295	6.47690 ± 0.47287	17.72 ± 1.29	92.70	6.55	0.259 ± 0.012

Σ			6.9427454	0.0024888	0.5642751	0.0003504	0.0102879	0.0001133	0.5634660	0.0058873	0.0114448	0.0000814				
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Information on Analysis and Constants Used in Calculations		Results						
		40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD	39Ar(k) (%.n)	K/Ca ± 2σ	
Sample = 1180011-2	Age Equations = Min et al. (2000)							
Material = Groundmass	Negative Intensities = Allowed							
Location = Kerguelen Plateau	Decay Constant 40K = 5.543 ± 0.044 E-10 1/a							
Analyst = Kyle Krawl	Decay Constant 39Ar = 2.940 ± 0.029 E-07 1/h							
Project = KERGUELEN	Decay Constant 37Ar = 8.230 ± 0.082 E-04 1/h							
Mass Discrimination Law = LIN	Decay Constant 36Cl = 2.236 ± 0.045 E-06 1/a							
Irradiation = OSU2C13	Decay Constant 40K(EC,β <sup>+</sup> ) = 0.580 ± 0.009 E-10 1/a							
J = 0.00152397 ± 0.00000405	Decay Constant 40K(β <sup>-</sup> ) = 4.950 ± 0.043 E-10 1/a							
FCT-3 = 28.201 ± 0.023 Ma	Atmospheric Ratio 40/36(a) = 295.50							
IGSN = Undefined	Atmospheric Ratio 38/36(a) = 0.1869							
Preferred Age = Undefined	Production Ratio 39/37(ca) = 0.000673							
Classification = Undefined	Production Ratio 38/37(ca) = 0.000139							
Experiment Type = Undefined	Production Ratio 36/37(ca) = 0.000264							
Extraction Method = Undefined	Production Ratio 40/39(k) = 0.001010							
Heating = 0 sec	Production Ratio 38/39(k) = 0.011380							
Isolation = 15.00 min	Production Ratio 36/38(cl) = 316.00 ± 15.80							
Instrument = MAP215-50	Scaling Ratio K/Ca = 0.430							
Lithology = Undefined	Abundance Ratio 40K/K = 1.1700 ± 0.0199 E-04							
Lat-Lon = Undefined - Undefined	Atomic Weight K = 39.0983 ± 0.0001 g							
R1 ratio = Undefined	Recalibrated to FCT-3 Secondary Standard							
R2 ratio = Undefined	Standard Age = 28.201 ± 0.023 Ma							
R3 ratio = Undefined								
R4 ratio = Undefined								
R5 ratio = Undefined								
Collector Calibrations =								



OSU Argon Geochronology Lab																																			
Degassing Patterns			36Ar(a) [V]	%1σ	36Ar(c) [V]	%1σ	36Ar(ca) [V]	%1σ	36Ar(cl) [V]	%1σ	37Ar(ca) [V]	%1σ	38Ar(a) [V]	%1σ	38Ar(c) [V]	%1σ	38Ar(k) [V]	%1σ	38Ar(ca) [V]	%1σ	38Ar(cl) [V]	%1σ	39Ar(k) [V]	%1σ	39Ar(ca) [V]	%1σ	40Ar(r) [V]	%1σ	40Ar(a) [V]	%1σ	40Ar(c) [V]	%1σ	40Ar(k) [V]	%1σ	
	13C2114	500 °C	✓	0.0010336	3.05	0.0000000	0.00	0.0000011	9.40	0.0000000	799.10	0.0042081	9.40	0.0001932	3.05	0.0000000	0.00	0.0000327	1.31	0.0000006	9.40	0.0000047	799.12	0.0028719	1.31	0.0000028	9.40	0.0173754	53.85	0.3054334	3.05	0.0000000	0.00	0.0000029	1.31
	13C2116	600 °C	✓	0.0023463	0.91	0.0000000	0.00	0.0000026	4.04	0.0000000	71.51	0.0098100	4.04	0.0004385	0.91	0.0000000	0.00	0.0000973	0.51	0.0000014	4.04	0.0000539	71.71	0.0085463	0.51	0.0000066	4.04	0.0498939	12.84	0.6933404	0.91	0.0000000	0.00	0.0000086	0.51
	13C2117	700 °C	✓	0.0017299	1.55	0.0000000	0.00	0.0000047	3.61	0.0000000	38.11	0.0177311	3.61	0.0003233	1.55	0.0000000	0.00	0.0001959	0.32	0.0000025	3.61	0.0000845	38.49	0.0172159	0.32	0.0000119	3.61	0.1148391	6.91	0.5111760	1.55	0.0000000	0.00	0.0000174	0.32
	13C2119	800 °C	✓	0.0030378	1.00	0.0000000	0.00	0.0000198	2.35	0.0000000	26.87	0.0750281	2.35	0.0005678	1.00	0.0000000	0.00	0.0007630	0.16	0.0000104	2.35	0.0001936	27.40	0.0670451	0.16	0.0000505	2.35	0.4243760	2.12	0.8976833	1.00	0.0000000	0.00	0.0000677	0.16
	13C2120	900 °C	✓	0.0019276	1.94	0.0000000	0.00	0.0000260	2.32	0.0000000	17.85	0.0985418	2.32	0.0003603	1.94	0.0000000	0.00	0.0013366	0.06	0.0000137	2.32	0.0002220	18.64	0.1174482	0.06	0.0000663	2.32	0.7465803	1.49	0.5695987	1.94	0.0000000	0.00	0.0001186	0.06
	13C2122	1050 °C	✓	0.0008232	2.85	0.0000000	0.00	0.0000364	2.29	0.0000001	11.98	0.1377986	2.29	0.0001538	2.85	0.0000000	0.00	0.0021314	0.11	0.0000192	2.29	0.0004308	13.14	0.1872919	0.11	0.0000927	2.29	1.2105523	0.58	0.2432449	2.85	0.0000000	0.00	0.0001892	0.11
	13C2123	1250 °C	✓	0.0003336	8.08	0.0000000	0.00	0.0000420	2.32	0.0000001	10.05	0.1590413	2.32	0.0000623	8.08	0.0000000	0.00	0.0014398	0.18	0.0000221	2.32	0.0005341	11.40	0.1265170	0.18	0.0001070	2.32	0.8013138	1.00	0.0985652	8.08	0.0000000	0.00	0.0001278	0.18
	13C2125	1400 °C	✓	0.0000637	46.36	0.0000000	0.00	0.0000162	2.31	0.0000000	20.23	0.0613072	2.31	0.0000119	46.36	0.0000000	0.00	0.0004206	0.18	0.0000085	2.31	0.0001577	20.94	0.0369595	0.18	0.0000413	2.31	0.2393831	3.65	0.0188200	46.36	0.0000000	0.00	0.0000373	0.18
		Σ		0.0112956	0.72	0.0000000	0.00	0.0001488	1.04	0.0000004	7.23	0.5634660	1.04	0.0021112	0.72	0.0000000	0.00	0.0064171	0.06	0.0000783	1.04	0.0016813	7.64	0.5638959	0.06	0.0003792	1.04	3.6043140	0.67	3.3378619	0.72	0.0000000	0.00	0.0005695	0.06
		Σ									0.0114448	0.71	0.5634660	1.04								0.0102879	1.26			0.5642751	0.06							6.9427454	0.49



Additional Parameters			40Ar/39Ar	1σ	37Ar/39Ar	1σ	36Ar/39Ar	1σ	Time (days)	37Ar (decay)	39Ar (decay)	40Ar (moles)
13C2114	500 °C	✓	112.290867	1.504533	1.463785	0.138905	0.359933	0.011917	114.649	9.650477	1.00081017	6.456E-14
13C2116	600 °C	✓	86.899275	0.461032	1.146971	0.046745	0.274635	0.002867	114.684	9.657230	1.00081042	1.486E-13
13C2117	700 °C	✓	36.338433	0.125963	1.029210	0.037317	0.100684	0.001585	114.701	9.660543	1.00081054	1.252E-13
13C2119	800 °C	✓	19.705117	0.033819	1.118226	0.026296	0.045572	0.000459	114.736	9.667170	1.00081079	2.644E-13
13C2120	900 °C	✓	11.201153	0.011270	0.838551	0.019467	0.016625	0.000318	114.754	9.670619	1.00081092	2.633E-13
13C2122	1050 °C	✓	7.759369	0.009557	0.735378	0.016878	0.004588	0.000125	114.789	9.677253	1.00081116	2.908E-13
13C2123	1250 °C	✓	7.107707	0.015494	1.256012	0.029239	0.002967	0.000213	114.808	9.680838	1.00081129	1.800E-13
13C2125	1400 °C	✓	6.979324	0.014172	1.656916	0.038361	0.002160	0.000798	114.846	9.688144	1.00081156	5.165E-14



Procedure Blanks		36Ar [V]	1σ	37Ar [V]	1σ	38Ar [V]	1σ	39Ar [V]	1σ	40Ar [V]	1σ
13C2114	500 °C	0.0002926	0.0000225	0.0000283	0.0000173	0.0000112	0.0000246	0.0000679	0.0000250	0.0013396	0.0000422
13C2116	600 °C	0.0002704	0.0000117	0.0000081	0.0000060	0.0000060	0.0000163	0.0000065	0.0000162	0.0026828	0.0000430
13C2117	700 °C	0.0002704	0.0000117	0.0000081	0.0000060	0.0000060	0.0000163	0.0000065	0.0000162	0.0026828	0.0000430
13C2119	800 °C	0.0002707	0.0000162	0.0000086	0.0000166	0.0000024	0.0000200	0.0000623	0.0000204	0.0013348	0.0000472
13C2120	900 °C	0.0002707	0.0000162	0.0000086	0.0000166	0.0000024	0.0000200	0.0000623	0.0000204	0.0013348	0.0000472
13C2122	1050 °C	0.0002548	0.0000076	0.0000073	0.0000168	0.0000061	0.0000252	0.0000196	0.0000196	0.0013248	0.0000351
13C2123	1250 °C	0.0002548	0.0000076	0.0000073	0.0000168	0.0000061	0.0000252	0.0000196	0.0000196	0.0013248	0.0000351
13C2125	1400 °C	0.0003252	0.0000203	0.0000046	0.0000187	0.0000273	0.0000203	0.0000129	0.0000298	0.0020319	0.0000472



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Intercept Values		36Ar [V]	1σ	r2		37Ar [V]	1σ	r2		38Ar [V]	1σ	r2		39Ar [V]	1σ	r2		40Ar [V]	1σ	r2		
	13C2114	500 °C	0.0013580	0.0000232	0.6671	LIN #	0.0004741	0.0000368	0.2191	EXP #	0.0002459	0.0000290	0.0336	LIN #	0.0029645	0.0000283	0.9874	EXP #	0.3246057	0.0009816	0.9790	EXP #
	13C2116	600 °C	0.0026887	0.0000184	0.9389	LIN #	0.0010467	0.0000342	0.0428	EXP #	0.0005942	0.0000352	0.0680	LIN #	0.0086248	0.0000409	0.9890	EXP #	0.7470463	0.0010515	0.9956	EXP #
	13C2117	700 °C	0.0020565	0.0000248	0.7599	LIN #	0.0018848	0.0000524	0.3949	EXP #	0.0006096	0.0000275	0.0235	LIN #	0.0173679	0.0000535	0.0127	EXP #	0.6297228	0.0007862	0.9962	EXP #
	13C2119	800 °C	0.0034200	0.0000265	0.8739	LIN # 2 4 10	0.0079469	0.0000438	0.9719	EXP # 1	0.0015616	0.0000474	0.3124	LIN #	0.0676986	0.0001064	0.9908	EXP #	1.3259812	0.0007133	0.9994	EXP # 3
	13C2120	900 °C	0.0022830	0.0000348	0.5820	LIN #	0.0104310	0.0000470	0.9760	EXP #	0.0019656	0.0000319	0.5628	LIN #	0.1185236	0.0000615	0.9995	EXP #	1.3201408	0.0010404	0.9982	EXP #
	13C2122	1050 °C	0.0011406	0.0000229	0.4496	LIN #	0.0145732	0.0000418	0.9900	EXP #	0.0027850	0.0000391	0.7218	LIN #	0.1888826	0.0002002	0.9984	EXP #	1.4582276	0.0007888	0.9992	EXP # 1
	13C2123	1250 °C	0.0006422	0.0000267	0.6547	LIN # 9	0.0168124	0.0000780	0.9792	EXP #	0.0020973	0.0000380	0.6258	LIN #	0.1276264	0.0002252	0.9959	EXP #	0.9031379	0.0011140	0.9947	EXP #
	13C2125	1400 °C	0.0004081	0.0000226	0.0943	LIN #	0.0064771	0.0000182	0.9930	EXP #	0.0006356	0.0000230	0.6307	LIN # 3	0.0373118	0.0000587	0.9964	EXP #	0.2607678	0.0002435	0.9959	EXP # 1



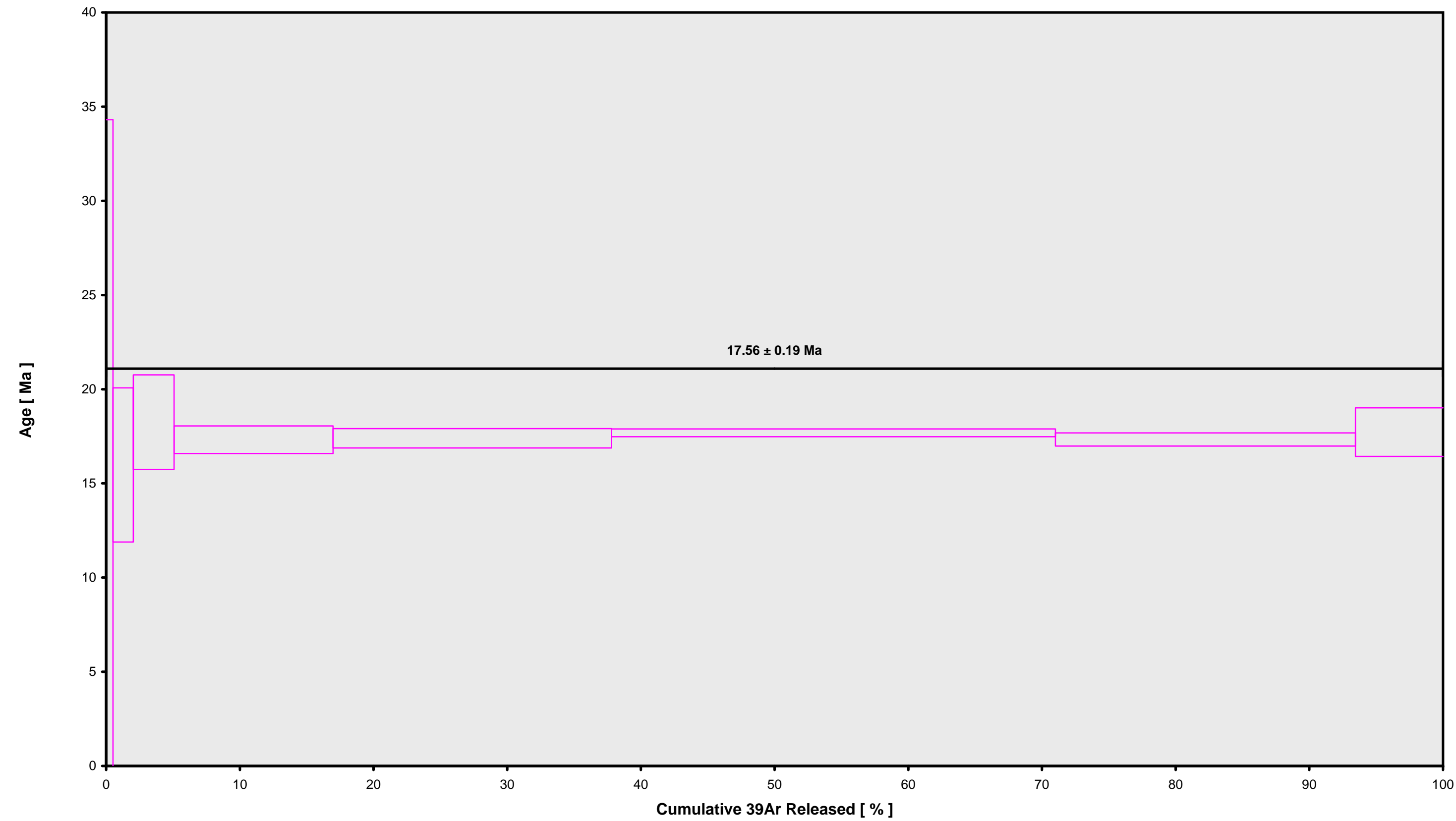
OSU Argon Geochronology Lab																																			
Sample Parameters		Sample	Material	Location	Analyst	Temp	Standard Name	Standard (in Ma)	%1σ	Standard Reference	Standard 40Ar/39Ar	%1σ	J	%1σ	Air 40Ar/36Ar	%1σ	MDF	%1σ	Volume Ratio	Sensitivity (mol/volt)	Day	Month	Year	Hour	Min	Resist	Irradiation	X-pos	Y-pos	Z/H-pos	Project	Experiment	Nmb		
		13C2114	500 °C	1180011-2	Groundmass	Kerguelen Plateau	Kyle Krawl	500	FCT-3	28.201	0.083	Kuiper et al., 2008			0.00152397	0.266			1.00697	0.030	0.9986	2E-13	29	JUL	2013	7	35	1	OSU2C13	0.00	0.00	50.70	Kerguelen	13C2114	01
		13C2116	600 °C	1180011-2	Groundmass	Kerguelen Plateau	Kyle Krawl	600	FCT-3	28.201	0.083	Kuiper et al., 2008			0.00152397	0.266			1.00697	0.030	0.9985	2E-13	29	JUL	2013	8	26	1	OSU2C13	0.00	0.00	50.70	Kerguelen	13C2114	01
		13C2117	700 °C	1180011-2	Groundmass	Kerguelen Plateau	Kyle Krawl	700	FCT-3	28.201	0.083	Kuiper et al., 2008			0.00152397	0.266			1.00697	0.030	0.9984	2E-13	29	JUL	2013	8	51	1	OSU2C13	0.00	0.00	50.70	Kerguelen	13C2114	01
		13C2119	800 °C	1180011-2	Groundmass	Kerguelen Plateau	Trevor Smith	800	FCT-3	28.201	0.083	Kuiper et al., 2008			0.00152397	0.266			1.00697	0.030	0.9981	2E-13	29	JUL	2013	9	41	1	OSU2C13	0.00	0.00	50.70	Kerguelen	13C2114	01
		13C2120	900 °C	1180011-2	Groundmass	Kerguelen Plateau	Kyle Krawl	900	FCT-3	28.201	0.083	Kuiper et al., 2008			0.00152397	0.266			1.00697	0.030	0.9981	2E-13	29	JUL	2013	10	7	1	OSU2C13	0.00	0.00	50.70	Kerguelen	13C2114	01
		13C2122	1050 °C	1180011-2	Groundmass	Kerguelen Plateau	Trevor Smith	1050	FCT-3	28.201	0.083	Kuiper et al., 2008			0.00152397	0.266			1.00697	0.030	0.998	2E-13	29	JUL	2013	10	57	1	OSU2C13	0.00	0.00	50.70	Kerguelen	13C2114	01
		13C2123	1250 °C	1180011-2	Groundmass	Kerguelen Plateau	Trevor Smith	1250	FCT-3	28.201	0.083	Kuiper et al., 2008			0.00152397	0.266			1.00697	0.030	0.998	2E-13	29	JUL	2013	11	24	1	OSU2C13	0.00	0.00	50.70	Kerguelen	13C2114	01
		13C2125	1400 °C	1180011-2	Groundmass	Kerguelen Plateau	Trevor Smith	1400	FCT-3	28.201	0.083	Kuiper et al., 2008			0.00152397	0.266			1.00697	0.030	0.9981	2E-13	29	JUL	2013	12	19	1	OSU2C13	0.00	0.00	50.70	Kerguelen	13C2114	01



OSU Argon Geochronology Lab																											
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
	13C2114	500 °C	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0
	13C2116	600 °C	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0
	13C2117	700 °C	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0
	13C2119	800 °C	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0
	13C2120	900 °C	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0
	13C2122	1050 °C	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0
	13C2123	1250 °C	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0
	13C2125	1400 °C	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0



13C2114.AGE >>> 1180011-2 >>> KERGUELEN PROJECT



**Ar-Ages in Ma**

**WEIGHTED PLATEAU**  
17.56 ± 0.19

**TOTAL FUSION**  
17.49 ± 0.25

**NORMAL ISOCHRON**  
17.56 ± 0.20

**INVERSE ISOCHRON**  
17.59 ± 0.20

**MSWD (PROBABILITY)**  
0.71 (66%)

**Sample Info**

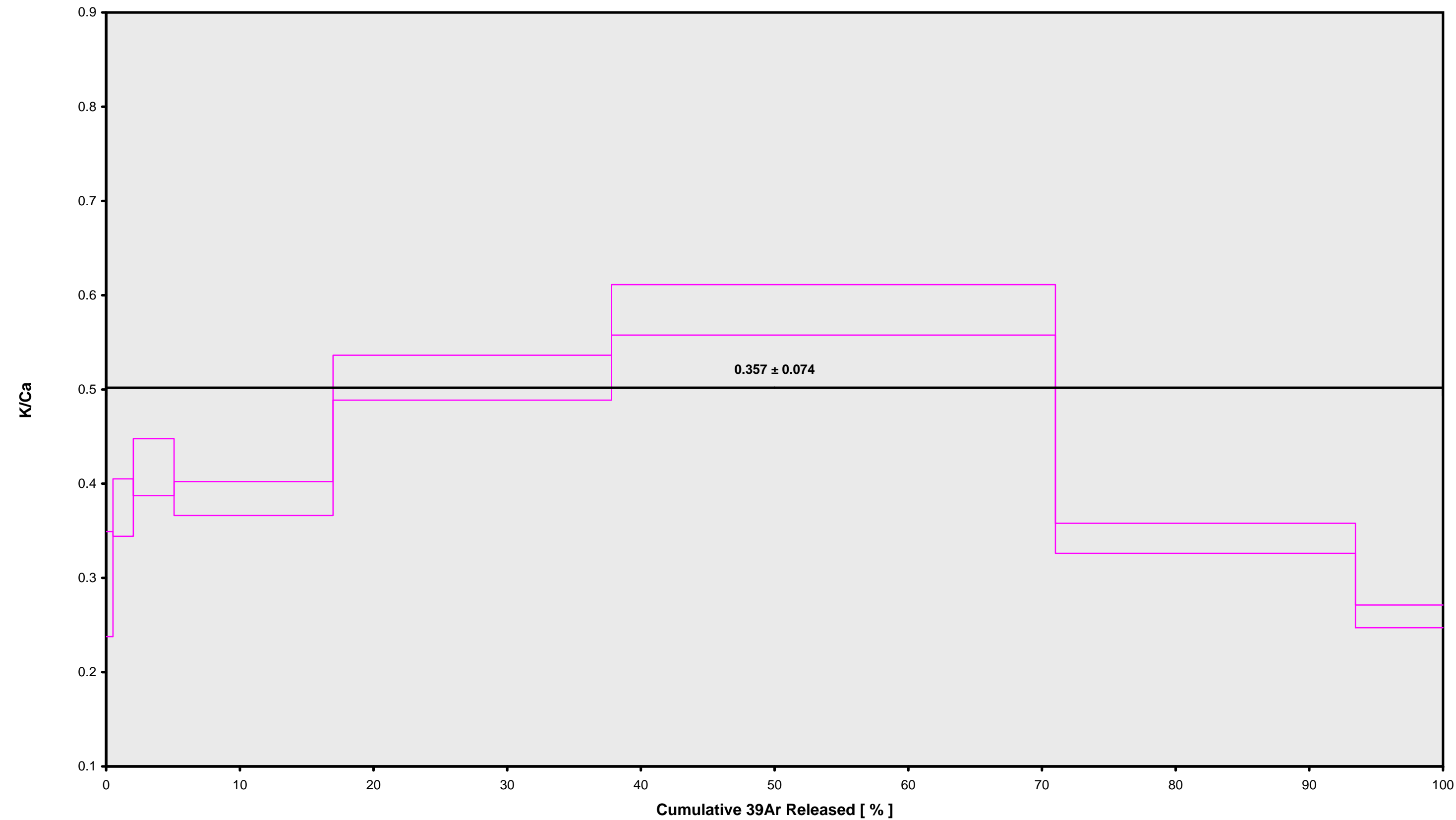
Groundmass  
Kerguelen Plateau  
Kyle Krawl

IRR = OSU2C13  
J = 0.00152397 ± 0.00000405

**RECALIBRATED AGE**



13C2114.AGE >>> 1180011-2 >>> KERGUELEN PROJECT



Ar-Ages in Ma

WEIGHTED PLATEAU

17.56  $\pm$  0.19

TOTAL FUSION

17.49  $\pm$  0.25

NORMAL ISOCHRON

17.56  $\pm$  0.20

INVERSE ISOCHRON

17.59  $\pm$  0.20

Sample Info

Groundmass

Kerguelen Plateau

Kyle Krawl

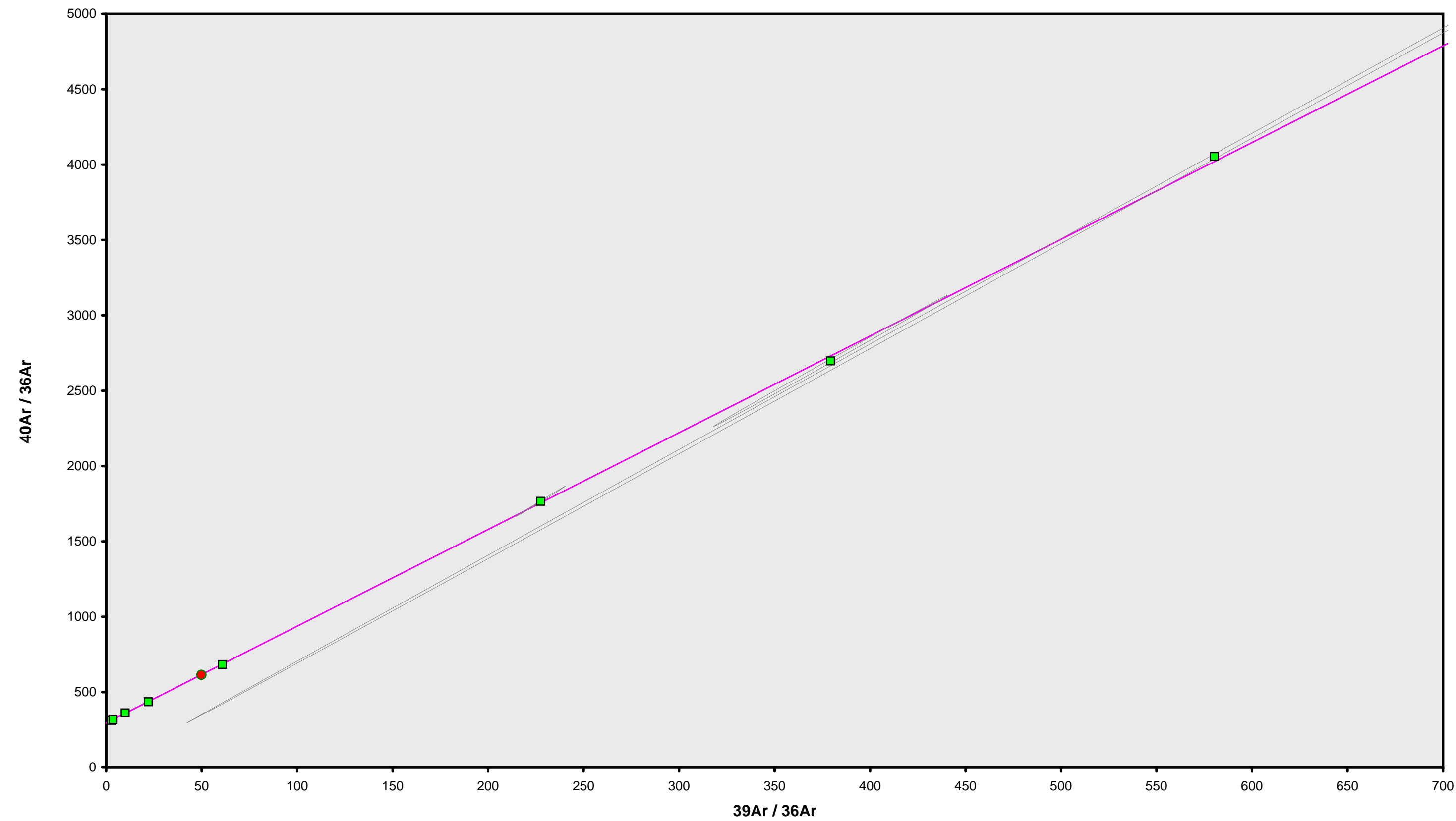
IRR = OSU2C13

J = 0.00152397  $\pm$  0.00000405

RECALIBRATED AGE



13C2114.AGE >>> 1180011-2 >>> KERGUELEN PROJECT



**Ar-Ages in Ma**

**WEIGHTED PLATEAU**  
17.56 ± 0.19

**TOTAL FUSION**  
17.49 ± 0.25

**NORMAL ISOCHRON**  
17.56 ± 0.20

**INVERSE ISOCHRON**  
17.59 ± 0.20

**MSWD (PROBABILITY)**  
0.78 (58%)

**40AR/36AR INTERCEPT**  
294.2 ± 3.8

**Sample Info**

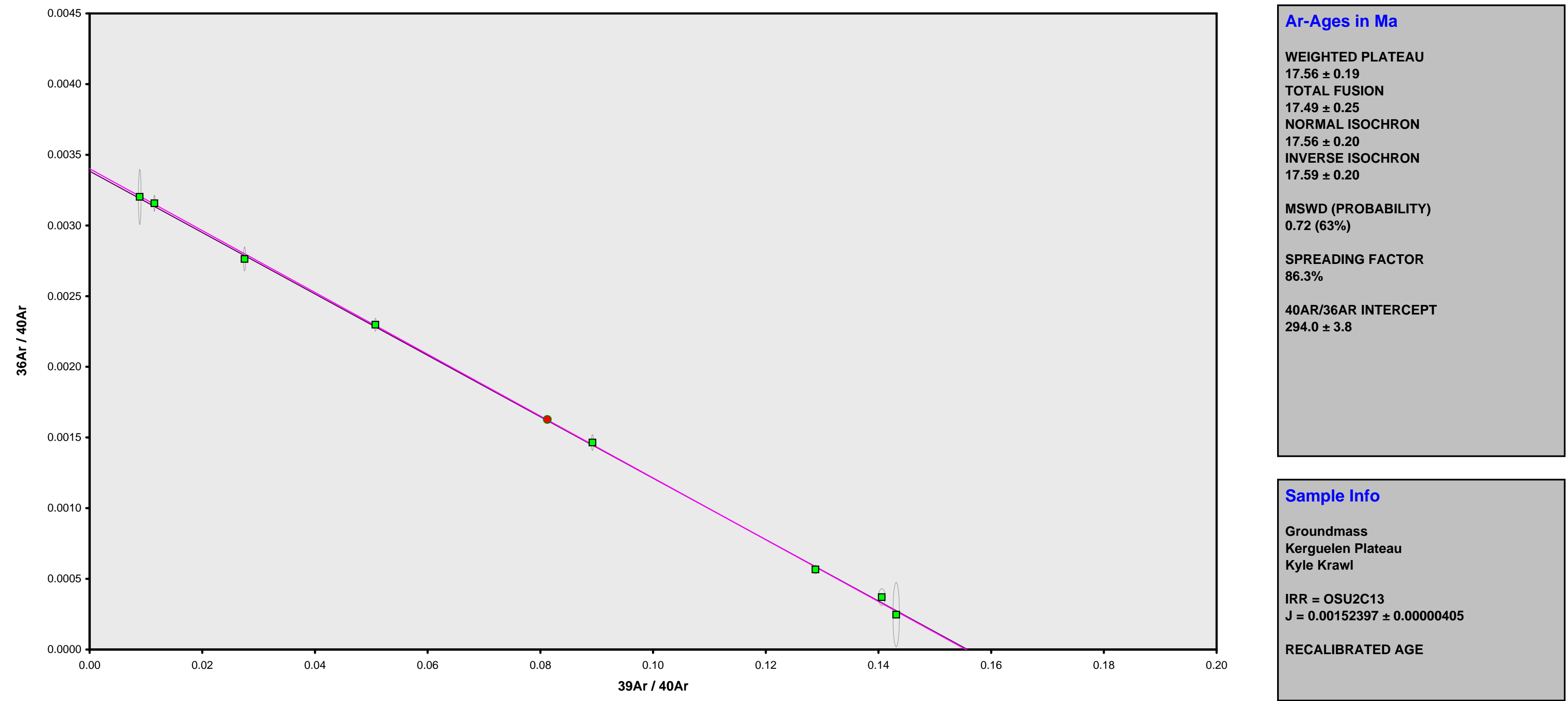
Groundmass  
Kerguelen Plateau  
Kyle Krawl

IRR = OSU2C13  
J = 0.00152397 ± 0.00000405

**RECALIBRATED AGE**



13C2114.AGE >>> 1180011-2 >>> KERGUELEN PROJECT





Incremental Heating		36Ar(a) [V]	37Ar(ca) [V]	38Ar(cl) [V]	39Ar(k) [V]	40Ar(r) [V]	Age ± 2σ (Ma)	40Ar(r) (%)	39Ar(k) (%)	K/Ca ± 2σ
13C2101	500 °C	0.0212096	0.0107536	0.0003206	0.0123449	0.1177925	26.34 ± 3.79	1.84	2.04	0.494 ± 0.034
13C2103	600 °C	✓ 0.0112417	0.0213770	0.0001047	0.0157960	0.1148895	20.11 ± 2.61	3.34	2.61	0.318 ± 0.016
13C2104	700 °C	✓ 0.0198715	0.1045178	0.0003375	0.0732114	0.5145136	19.43 ± 0.69	8.06	12.11	0.301 ± 0.014
13C2106	800 °C	✓ 0.0149015	0.1762408	0.0002698	0.1453124	1.0387373	19.77 ± 0.38	19.09	24.03	0.355 ± 0.016
13C2107	900 °C	✓ 0.0090171	0.1453631	0.0001419	0.1425143	1.0024637	19.45 ± 0.33	27.34	23.56	0.422 ± 0.019
13C2109	1050 °C	✓ 0.0058366	0.1594327	0.0000706	0.1246480	0.8792309	19.51 ± 0.29	33.76	20.61	0.336 ± 0.015
13C2110	1250 °C	✓ 0.0038529	0.3094013	0.0000514	0.0726455	0.5099089	19.41 ± 0.82	30.93	12.01	0.101 ± 0.005
13C2112	1400 °C	0.0013419	0.1523419	0.0000367	0.0183023	0.1511843	22.82 ± 1.74	27.60	3.03	0.052 ± 0.002

Σ		0.0872728	1.0794282	0.0013331	0.6047748	4.3287207				
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Information on Analysis	Results	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD	39Ar(k) (%,n)	K/Ca ± 2σ
Sample = 205-2 Material = Groundmass Location = Kerguelen Plateau Analyst = Kyle Krawl Project = KERGUELEN Mass Discrimination Law = LIN Irradiation = OSU2C13 J = 0.00154115 ± 0.00000405 FCT-3 = 28.201 ± 0.023 Ma	Age Plateau					
	Recalibrated	7.06621 ± 0.06478 ± 0.92%	19.54 ± 0.21 ± 1.05%	0.42 83%	94.93 6	0.171 ± 0.099
			Full External Error ± 0.49	2.26	2σ Confidence Limit	
			Analytical Error ± 0.18	1.0000	Error Magnification	
	Total Fusion Age					
	Recalibrated	7.15757 ± 0.07988 ± 1.12%	19.79 ± 0.24 ± 1.23%		8	0.241 ± 0.005
			Full External Error ± 0.51			
				Analytical Error ± 0.22		



Normal Isochron		39(k)/36(a) ± 2σ		40(a+r)/36(a) ± 2σ	r.i.
13C2101	500 °C		0.58 ± 0.01	301.05 ± 0.82	0.2151
13C2103	600 °C	✓	1.41 ± 0.01	305.72 ± 1.37	0.4232
13C2104	700 °C	✓	3.68 ± 0.01	321.39 ± 1.00	0.7524
13C2106	800 °C	✓	9.75 ± 0.05	365.21 ± 1.65	0.7926
13C2107	900 °C	✓	15.80 ± 0.10	406.67 ± 2.57	0.9490
13C2109	1050 °C	✓	21.36 ± 0.15	446.14 ± 3.15	0.8957
13C2110	1250 °C	✓	18.85 ± 0.36	427.84 ± 8.05	0.9839
13C2112	1400 °C		13.64 ± 0.41	408.16 ± 11.86	0.9677

Results	40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD
Normal Isochron Recalibrated	295.68 ± 0.92 ± 0.31%	7.05116 ± 0.09951 ± 1.41%	19.50 ± 0.29 ± 1.50%	0.49 74%
Full External Error ± 0.53 Analytical Error ± 0.27				
Statistics	2σ Confidence Limit Error Magnification Number of Data Points	2.41 1.0000 6	Convergence Number of Iterations Calculated Line	0.000000062051 11 Weighted York-2



Inverse Isochron		39(k)/40(a+r) ± 2σ		36(a)/40(a+r) ± 2σ	r.i.
13C2101	500 °C		0.0019334 ± 0.0000214	0.00332167 ± 0.00000902	0.0252
13C2103	600 °C	✓	0.0045961 ± 0.0000402	0.00327097 ± 0.00001466	0.0462
13C2104	700 °C	✓	0.0114634 ± 0.0000307	0.00311147 ± 0.00000970	0.0243
13C2106	800 °C	✓	0.0267013 ± 0.0000915	0.00273817 ± 0.00001235	0.0165
13C2107	900 °C	✓	0.0388638 ± 0.0000792	0.00245898 ± 0.00001556	0.1195
13C2109	1050 °C	✓	0.0478692 ± 0.0001545	0.00224144 ± 0.00001585	0.2289
13C2110	1250 °C	✓	0.0440692 ± 0.0001493	0.00233730 ± 0.00004398	0.0538
13C2112	1400 °C		0.0334155 ± 0.0002514	0.00245000 ± 0.00007118	0.0242

Results	40(a)/36(a) ± 2σ		40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD
Inverse Isochron Recalibrated	295.68 ± 0.92		7.05129 ± 0.09956	19.50 ± 0.29	0.49
	± 0.31%		± 1.41%	± 1.50%	74%
			Full External Error ± 0.53		
			Analytical Error ± 0.27		
Statistics	2σ Confidence Limit	2.41	Convergence	0.0000000274	
	Error Magnification	1.0000	Number of Iterations	5	
	Number of Data Points	6	Calculated Line	Weighted York-2	
	Spreading Factor	30.5%			



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Relative Abundances		40Ar [V]	1σ	39Ar [V]	1σ	38Ar [V]	1σ	37Ar [V]	1σ	36Ar [V]	1σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	40Ar(r) (%)	39Ar(k) (%)	K/Ca ± 2σ
13C2101	500 °C	6.385229	0.0027764	0.0123521	0.0000681	0.0044266	0.0000310	0.0107536	0.0003633	0.0212125	0.0000273	9.54182 ± 1.38464	26.34 ± 3.79	1.84	2.04	0.494 ± 0.034
13C2103	600 °C ✓	3.436834	0.0023110	0.0158104	0.0000682	0.0023885	0.0000250	0.0213770	0.0005376	0.0112474	0.0000240	7.27332 ± 0.94775	20.11 ± 2.61	3.34	2.61	0.318 ± 0.016
13C2104	700 °C ✓	6.386630	0.0014367	0.0732818	0.0000965	0.0048992	0.0000419	0.1045178	0.0023585	0.0198992	0.0000307	7.02778 ± 0.25129	19.43 ± 0.69	8.06	12.11	0.301 ± 0.014
13C2106	800 °C ✓	5.442285	0.0013727	0.1454310	0.0002463	0.0047330	0.0000384	0.1762408	0.0039136	0.0149481	0.0000334	7.14831 ± 0.13928	19.77 ± 0.38	19.09	24.03	0.355 ± 0.016
13C2107	900 °C ✓	3.667165	0.0022760	0.1426122	0.0001151	0.0034692	0.0000281	0.1453631	0.0032384	0.0090555	0.0000280	7.03413 ± 0.12089	19.45 ± 0.33	27.34	23.56	0.422 ± 0.019
13C2109	1050 °C ✓	2.604058	0.0029759	0.1247553	0.0001421	0.0026021	0.0000403	0.1594327	0.0035513	0.0058787	0.0000195	7.05371 ± 0.10539	19.51 ± 0.29	33.76	20.61	0.336 ± 0.015
13C2110	1250 °C ✓	1.648515	0.0015267	0.0728537	0.0001029	0.0016412	0.0000281	0.3094013	0.0069043	0.0039346	0.0000360	7.01914 ± 0.29712	19.41 ± 0.82	30.93	12.01	0.101 ± 0.005
13C2112	1400 °C	0.547739	0.0006301	0.0184048	0.0000655	0.0005170	0.0000220	0.1523419	0.0034112	0.0013821	0.0000194	8.26039 ± 0.63404	22.82 ± 1.74	27.60	3.03	0.052 ± 0.002
Σ		30.118455	0.0058105	0.6055013	0.0003572	0.0246768	0.0000922	1.0794282	0.0101835	0.0875581	0.0000788					

Information on Analysis and Constants Used in Calculations	
Sample = 205-2	Age Equations = Min et al. (2000)
Material = Groundmass	Negative Intensities = Allowed
Location = Kerguelen Plateau	Decay Constant 40K = 5.543 ± 0.044 E-10 1/a
Analyst = Kyle Krawl	Decay Constant 39Ar = 2.940 ± 0.029 E-07 1/h
Project = KERGUELEN	Decay Constant 37Ar = 8.230 ± 0.082 E-04 1/h
Mass Discrimination Law = LIN	Decay Constant 36Cl = 2.236 ± 0.045 E-06 1/a
Irradiation = OSU2C13	Decay Constant 40K(EC,β <sup>+</sup> ) = 0.580 ± 0.009 E-10 1/a
J = 0.00154115 ± 0.00000405	Decay Constant 40K(β <sup>-</sup> ) = 4.950 ± 0.043 E-10 1/a
FCT-3 = 28.201 ± 0.023 Ma	Atmospheric Ratio 40/36(a) = 295.50
IGSN = Undefined	Atmospheric Ratio 38/36(a) = 0.1869
Preferred Age = Undefined	Production Ratio 39/37(ca) = 0.000673
Classification = Undefined	Production Ratio 38/37(ca) = 0.000139
Experiment Type = Undefined	Production Ratio 36/37(ca) = 0.000264
Extraction Method = Undefined	Production Ratio 40/39(k) = 0.001010
Heating = 0 sec	Production Ratio 38/39(k) = 0.011380
Isolation = 15.00 min	Production Ratio 36/38(cl) = 316.00 ± 15.80
Instrument = MAP215-50	Scaling Ratio K/Ca = 0.430
Lithology = Undefined	Abundance Ratio 40K/K = 1.1700 ± 0.0199 E-04
Lat-Lon = Undefined - Undefined	Atomic Weight K = 39.0983 ± 0.0001 g
R1 ratio = Undefined	Recalibrated to FCT-3 Secondary Standard
R2 ratio = Undefined	Standard Age = 28.201 ± 0.023 Ma
R3 ratio = Undefined	
R4 ratio = Undefined	
R5 ratio = Undefined	
Collector Calibrations =	

Results	40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD	39Ar(k) (%.n)	K/Ca ± 2σ
Age Plateau Recalibrated		7.06621 ± 0.06478 ± 0.92%	19.54 ± 0.21 ± 1.05%	0.42 83%	94.93 6	0.171 ± 0.099
			Full External Error ± 0.49 Analytical Error ± 0.18	2.26 1.0000	2σ Confidence Limit Error Magnification	
Total Fusion Age Recalibrated		7.15757 ± 0.07988 ± 1.12%	19.79 ± 0.24 ± 1.23%		8	0.241 ± 0.005
			Full External Error ± 0.51 Analytical Error ± 0.22			
Normal Isochron Recalibrated	295.68 ± 0.92 ± 0.31%	7.05116 ± 0.09951 ± 1.41%	19.50 ± 0.29 ± 1.50%	0.49 74%	94.93 6	
			Full External Error ± 0.53 Analytical Error ± 0.27	2.41 1.0000	2σ Confidence Limit Error Magnification	
					11	Number of Iterations
				0.0000000621	Convergence	
Inverse Isochron Recalibrated	295.68 ± 0.92 ± 0.31%	7.05129 ± 0.09956 ± 1.41%	19.50 ± 0.29 ± 1.50%	0.49 74%	94.93 6	
			Full External Error ± 0.53 Analytical Error ± 0.27	2.41 1.0000	2σ Confidence Limit Error Magnification	
					5	Number of Iterations
				0.0000000274	Convergence	
				31%	Spreading Factor	



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Degassing Patterns		36Ar(a) [V]	%1σ	36Ar(c) [V]	%1σ	36Ar(ca) [V]	%1σ	36Ar(cl) [V]	%1σ	37Ar(ca) [V]	%1σ	38Ar(a) [V]	%1σ	38Ar(c) [V]	%1σ	38Ar(k) [V]	%1σ	38Ar(ca) [V]	%1σ	38Ar(cl) [V]	%1σ	39Ar(k) [V]	%1σ	39Ar(ca) [V]	%1σ	40Ar(r) [V]	%1σ	40Ar(a) [V]	%1σ	40Ar(c) [V]	%1σ	40Ar(k) [V]	%1σ	
	13C2101	500 °C	0.0212096	0.13	0.0000000	0.00	0.0000028	3.38	0.0000001	11.17	0.0107536	3.38	0.0039641	0.13	0.0000000	0.00	0.0001405	0.55	0.0000015	3.38	0.0003206	12.40	0.0123449	0.55	0.0000072	3.38	0.1177925	7.23	6.267424	0.13	0.0000000	0.00	0.0000125	0.55
	13C2103	600 °C	✓ 0.0112417	0.21	0.0000000	0.00	0.0000056	2.51	0.0000000	24.85	0.0213770	2.51	0.0021011	0.21	0.0000000	0.00	0.0001798	0.43	0.0000030	2.51	0.0001047	25.43	0.0157960	0.43	0.0000144	2.51	0.1148895	6.50	3.321928	0.21	0.0000000	0.00	0.0000160	0.43
	13C2104	700 °C	✓ 0.0198715	0.15	0.0000000	0.00	0.0000276	2.26	0.0000001	13.63	0.1045178	2.26	0.0037140	0.15	0.0000000	0.00	0.0008331	0.13	0.0000145	2.26	0.0003375	14.66	0.0732114	0.13	0.0000703	2.26	0.5145136	1.78	5.872042	0.15	0.0000000	0.00	0.0000739	0.13
	13C2106	800 °C	✓ 0.0149015	0.22	0.0000000	0.00	0.0000465	2.22	0.0000001	15.44	0.1762408	2.22	0.0027851	0.22	0.0000000	0.00	0.0016537	0.17	0.0000245	2.22	0.0002698	16.36	0.1453124	0.17	0.0001186	2.22	1.0387373	0.96	4.403401	0.22	0.0000000	0.00	0.0001468	0.17
	13C2107	900 °C	✓ 0.0090171	0.31	0.0000000	0.00	0.0000384	2.23	0.0000000	20.87	0.1453631	2.23	0.0016853	0.31	0.0000000	0.00	0.0016218	0.08	0.0000202	2.23	0.0001419	21.55	0.1425143	0.08	0.0000978	2.23	1.0024637	0.86	2.664558	0.31	0.0000000	0.00	0.0001439	0.08
	13C2109	1050 °C	✓ 0.0058366	0.33	0.0000000	0.00	0.0000421	2.23	0.0000000	57.56	0.1594327	2.23	0.0010909	0.33	0.0000000	0.00	0.0014185	0.11	0.0000222	2.23	0.0000706	57.81	0.1246480	0.11	0.0001073	2.23	0.8792309	0.74	1.724701	0.33	0.0000000	0.00	0.0001259	0.11
	13C2110	1250 °C	✓ 0.0038529	0.94	0.0000000	0.00	0.0000817	2.23	0.0000000	56.52	0.3094013	2.23	0.0007201	0.94	0.0000000	0.00	0.0008267	0.14	0.0000430	2.23	0.0000514	56.77	0.0726455	0.14	0.0002082	2.23	0.5099089	2.11	1.138533	0.94	0.0000000	0.00	0.0000734	0.14
	13C2112	1400 °C	0.0013419	1.45	0.0000000	0.00	0.0000402	2.24	0.0000000	61.08	0.1523419	2.24	0.0002508	1.45	0.0000000	0.00	0.0002083	0.36	0.0000212	2.24	0.0000367	61.31	0.0183023	0.36	0.0001025	2.24	0.1511843	3.82	0.396536	1.45	0.0000000	0.00	0.0000185	0.36
		Σ	0.0872728	0.09	0.0000000	0.00	0.0002850	0.94	0.0000003	7.38	1.0794282	0.94	0.0163113	0.09	0.0000000	0.00	0.0068823	0.06	0.0001500	0.94	0.0013331	7.74	0.6047748	0.06	0.0007265	0.94	4.3287207	0.55	25.789123	0.09	0.0000000	0.00	0.0006108	0.06
		Σ							0.0875581	0.09	1.0794282	0.94									0.0246768	0.42			0.6055013	0.06							30.118455	0.11



Additional Parameters			40Ar/39Ar	1σ	37Ar/39Ar	1σ	36Ar/39Ar	1σ	Time (days)	37Ar (decay)	39Ar (decay)	40Ar (moles)
13C2101	500 °C		516.934563	2.857728	0.870585	0.029801	1.717316	0.009718	111.885	9.137758	1.00079065	1.277E-12
13C2103	600 °C	✓	217.378009	0.949259	1.352086	0.034500	0.711392	0.003425	111.922	9.144403	1.00079091	6.874E-13
13C2104	700 °C	✓	87.151694	0.116391	1.426246	0.032239	0.271544	0.000550	111.940	9.147665	1.00079104	1.277E-12
13C2106	800 °C	✓	37.421770	0.064072	1.211852	0.026988	0.102785	0.000288	111.975	9.154066	1.00079129	1.088E-12
13C2107	900 °C	✓	25.714254	0.026178	1.019290	0.022723	0.063498	0.000203	111.992	9.157206	1.00079141	7.334E-13
13C2109	1050 °C	✓	20.873320	0.033677	1.277963	0.028504	0.047121	0.000165	112.027	9.163488	1.00079166	5.208E-13
13C2110	1250 °C	✓	22.627747	0.038223	4.246886	0.094958	0.054007	0.000500	112.044	9.166631	1.00079178	3.297E-13
13C2112	1400 °C		29.760569	0.111308	8.277270	0.187671	0.075097	0.001088	112.080	9.173046	1.00079203	1.095E-13



Procedure		36Ar		37Ar		38Ar		39Ar		40Ar	
		[V]	1σ	[V]	1σ	[V]	1σ	[V]	1σ	[V]	1σ
13C2101	500 °C	0.0003208	0.0000125	0.0000126	0.0000224	0.0000096	0.0000141	0.0000717	0.0000565	0.0048526	0.0002398
13C2103	600 °C	0.0003156	0.0000125	0.0000093	0.0000224	0.0000109	0.0000141	0.0000703	0.0000565	0.0047012	0.0002398
13C2104	700 °C	0.0003121	0.0000125	0.0000094	0.0000224	0.0000115	0.0000141	0.0000696	0.0000565	0.0046269	0.0002398
13C2106	800 °C	0.0003082	0.0000125	0.0000130	0.0000224	0.0000128	0.0000141	0.0000682	0.0000565	0.0044811	0.0002398
13C2107	900 °C	0.0003095	0.0000125	0.0000165	0.0000224	0.0000134	0.0000141	0.0000676	0.0000565	0.0044097	0.0002398
13C2109	1050 °C	0.0003230	0.0000125	0.0000266	0.0000224	0.0000146	0.0000141	0.0000662	0.0000565	0.0042668	0.0002398
13C2110	1250 °C	0.0003369	0.0000125	0.0000333	0.0000224	0.0000152	0.0000141	0.0000656	0.0000565	0.0041954	0.0002398
13C2112	1400 °C	0.0003850	0.0000125	0.0000503	0.0000224	0.0000165	0.0000141	0.0000642	0.0000565	0.0040496	0.0002398



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Intercept Values		36Ar [V]	1σ	r2		37Ar [V]	1σ	r2		38Ar [V]	1σ	r2		39Ar [V]	1σ	r2		40Ar [V]	1σ	r2		
	13C2101	500 °C	0.0221682	0.0000251	0.9978	LIN #	0.0012165	0.0000210	0.9939	EXP #	0.0045069	0.0000281	0.6609	LIN #	0.0125249	0.0000388	1.0000	EXP #	6.4028879	0.0027716	0.9993	EXP #
	13C2103	600 °C	0.0119000	0.0000214	0.9955	LIN # 1	0.0024006	0.0000177	0.9689	EXP # 4 8	0.0024375	0.0000211	0.6172	LIN #	0.0160101	0.0000391	0.9998	EXP #	3.4484318	0.0023031	0.9990	EXP # 2 8
	13C2104	700 °C	0.0208070	0.0000290	0.9970	EXP # 3 11	0.0116970	0.0000461	0.6939	LIN # 1 4	0.0049890	0.0000401	0.1453	LIN #	0.0739507	0.0000791	0.9996	EXP #	6.4040650	0.0014194	0.9998	EXP # 1
	13C2106	800 °C	0.0157039	0.0000320	0.9916	EXP #	0.0197072	0.0000244	0.9968	EXP # 6	0.0048214	0.0000364	0.0236	LIN #	0.1466885	0.0002418	0.9154	EXP # 1 2	5.4576815	0.0013543	0.9998	EXP # 1
	13C2107	900 °C	0.0096364	0.0000259	0.9814	LIN #	0.0162546	0.0000325	0.9912	EXP # 9	0.0035380	0.0000248	0.0456	LIN #	0.1438459	0.0001013	0.9878	EXP # 7 8	3.6789330	0.0022679	0.9988	EXP # 2
	13C2109	1050 °C	0.0063781	0.0000157	0.9830	LIN # 3 5 9	0.0178242	0.0000349	0.9950	EXP #	0.0026583	0.0000384	0.1364	LIN #	0.1258417	0.0001316	0.9927	EXP #	2.6135517	0.0029722	0.9964	EXP # 6
	13C2110	1250 °C	0.0043899	0.0000349	0.8417	LIN #	0.0345601	0.0000891	0.9945	EXP #	0.0016827	0.0000248	0.2233	LIN #	0.0735151	0.0000870	0.9846	EXP # 2	1.6560225	0.0015108	0.9977	EXP # 1 5
	13C2112	1400 °C	0.0018090	0.0000156	0.8959	EXP # 7 10 11	0.0170370	0.0000494	0.9921	EXP #	0.0005417	0.0000174	0.2049	LIN # 3	0.0186178	0.0000340	0.9629	EXP #	0.5528386	0.0005838	0.9962	EXP # 1 2 4 9



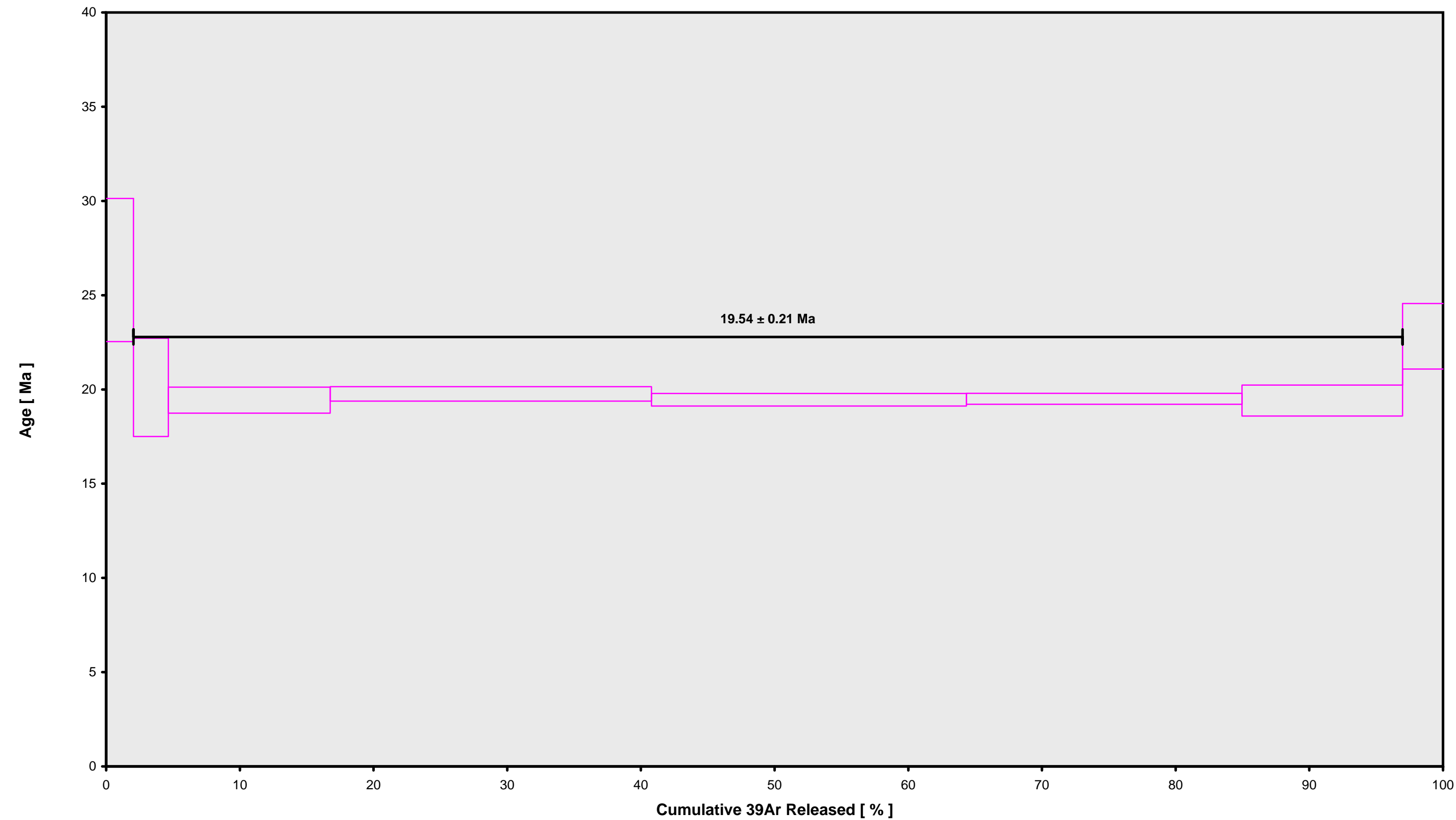
OSU Argon Geochronology Lab																																		
Sample Parameters		Sample	Material	Location	Analyst	Temp	Standard Name	Standard (in Ma)	%1σ	Standard Reference	Standard 40Ar/39Ar	%1σ	J	%1σ	Air 40Ar/36Ar	%1σ	MDF	%1σ	Volume Ratio	Sensitivity (mol/volt)	Day	Month	Year	Hour	Min	Resist	Irradiation	X-pos	Y-pos	Z/H-pos	Project	Experiment	Nmb	
		13C2101	500 °C	205-2	Groundmass	Kerguelen Plateau	Kyle Krawl	500	FCT-3	28.201	0.083	Kuiper et al., 2008		0.00154115	0.263			1.00697	0.001	0.998	2E-13	26	JUL	2013	13	15	1	OSU2C13	0.00	0.00	47.40	Kerguelen	13C2101	01
		13C2103	600 °C	205-2	Groundmass	Kerguelen Plateau	Kyle Krawl	600	FCT-3	28.201	0.083	Kuiper et al., 2008		0.00154115	0.263			1.00697	0.001	0.998	2E-13	26	JUL	2013	14	8	1	OSU2C13	0.00	0.00	47.40	Kerguelen	13C2101	01
		13C2104	700 °C	205-2	Groundmass	Kerguelen Plateau	Kyle Krawl	700	FCT-3	28.201	0.083	Kuiper et al., 2008		0.00154115	0.263			1.00697	0.001	0.998	2E-13	26	JUL	2013	14	34	1	OSU2C13	0.00	0.00	47.40	Kerguelen	13C2101	01
		13C2106	800 °C	205-2	Groundmass	Kerguelen Plateau	Kyle Krawl	800	FCT-3	28.201	0.083	Kuiper et al., 2008		0.00154115	0.263			1.00697	0.001	0.998	2E-13	26	JUL	2013	15	25	1	OSU2C13	0.00	0.00	47.40	Kerguelen	13C2101	01
		13C2107	900 °C	205-2	Groundmass	Kerguelen Plateau	Kyle Krawl	900	FCT-3	28.201	0.083	Kuiper et al., 2008		0.00154115	0.263			1.00697	0.001	0.998	2E-13	26	JUL	2013	15	50	1	OSU2C13	0.00	0.00	47.40	Kerguelen	13C2101	01
		13C2109	1050 °C	205-2	Groundmass	Kerguelen Plateau	Kyle Krawl	1050	FCT-3	28.201	0.083	Kuiper et al., 2008		0.00154115	0.263			1.00697	0.001	0.998	2E-13	26	JUL	2013	16	40	1	OSU2C13	0.00	0.00	47.40	Kerguelen	13C2101	01
		13C2110	1250 °C	205-2	Groundmass	Kerguelen Plateau	Kyle Krawl	1250	FCT-3	28.201	0.083	Kuiper et al., 2008		0.00154115	0.263			1.00697	0.001	0.998	2E-13	26	JUL	2013	17	5	1	OSU2C13	0.00	0.00	47.40	Kerguelen	13C2101	01
		13C2112	1400 °C	205-2	Groundmass	Kerguelen Plateau	Kyle Krawl	1400	FCT-3	28.201	0.083	Kuiper et al., 2008		0.00154115	0.263			1.00697	0.001	0.9981	2E-13	26	JUL	2013	17	56	1	OSU2C13	0.00	0.00	47.40	Kerguelen	13C2101	01



Irradiation Constants		OSU Argon Geochronology Lab																										
		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	
13C2101	500 °C	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0	
13C2103	600 °C	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0	
13C2104	700 °C	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0	
13C2106	800 °C	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0	
13C2107	900 °C	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0	
13C2109	1050 °C	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0	
13C2110	1250 °C	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0	
13C2112	1400 °C	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0	



13C2101.AGE >>> 205-2 >>> KERGUELEN PROJECT



Ar-Ages in Ma

WEIGHTED PLATEAU

19.54 ± 0.21

TOTAL FUSION

19.79 ± 0.24

NORMAL ISOCHRON

19.50 ± 0.29

INVERSE ISOCHRON

19.50 ± 0.29

MSWD (PROBABILITY)

0.42 (83%)

Sample Info

Groundmass

Kerguelen Plateau

Kyle Krawl

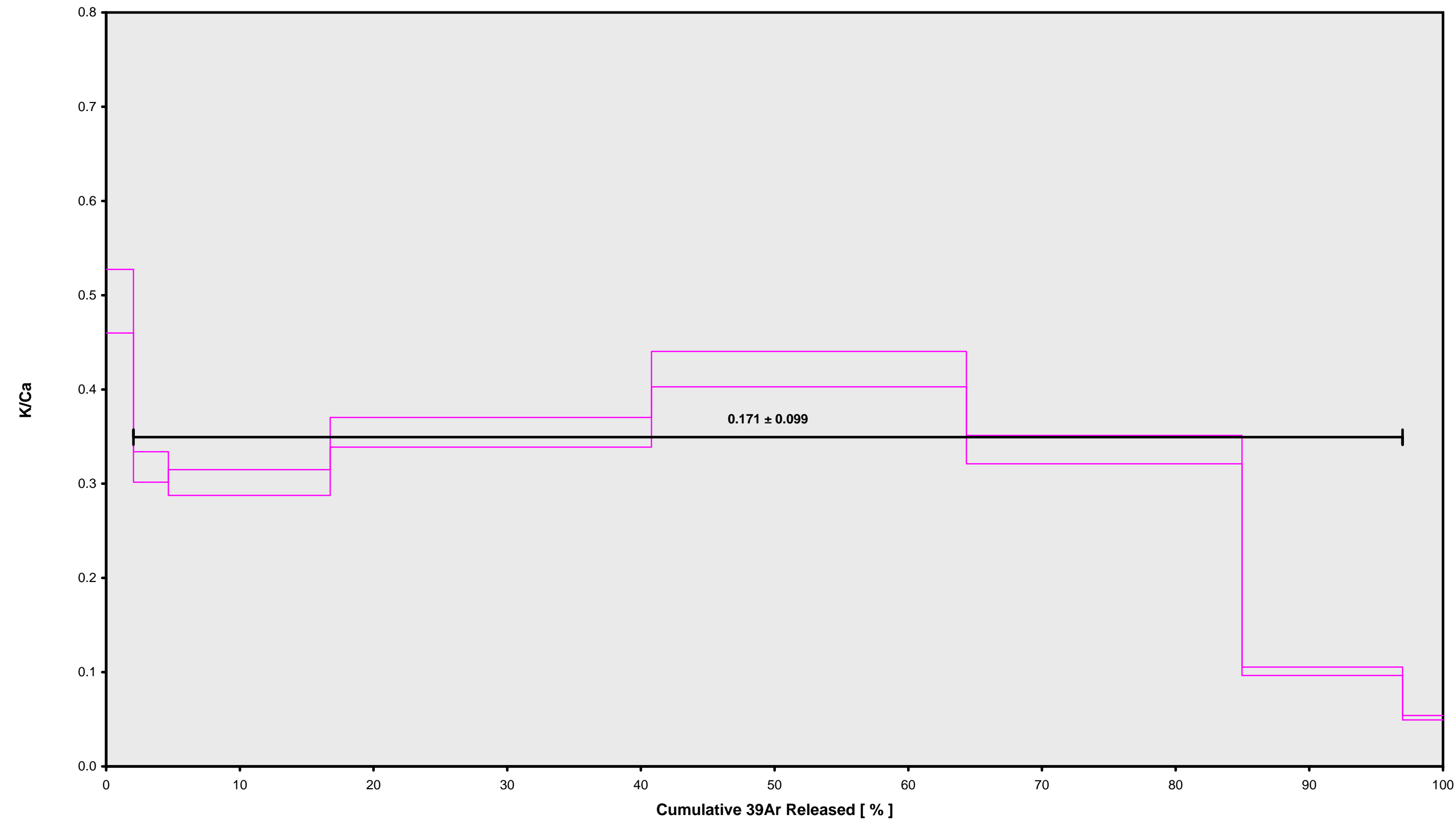
IRR = OSU2C13

J = 0.00154115 ± 0.00000405

RECALIBRATED AGE



13C2101.AGE >>> 205-2 >>> KERGUELEN PROJECT



Ar-Ages in Ma

WEIGHTED PLATEAU

19.54  $\pm$  0.21

TOTAL FUSION

19.79  $\pm$  0.24

NORMAL ISOCHRON

19.50  $\pm$  0.29

INVERSE ISOCHRON

19.50  $\pm$  0.29

Sample Info

Groundmass

Kerguelen Plateau

Kyle Krawl

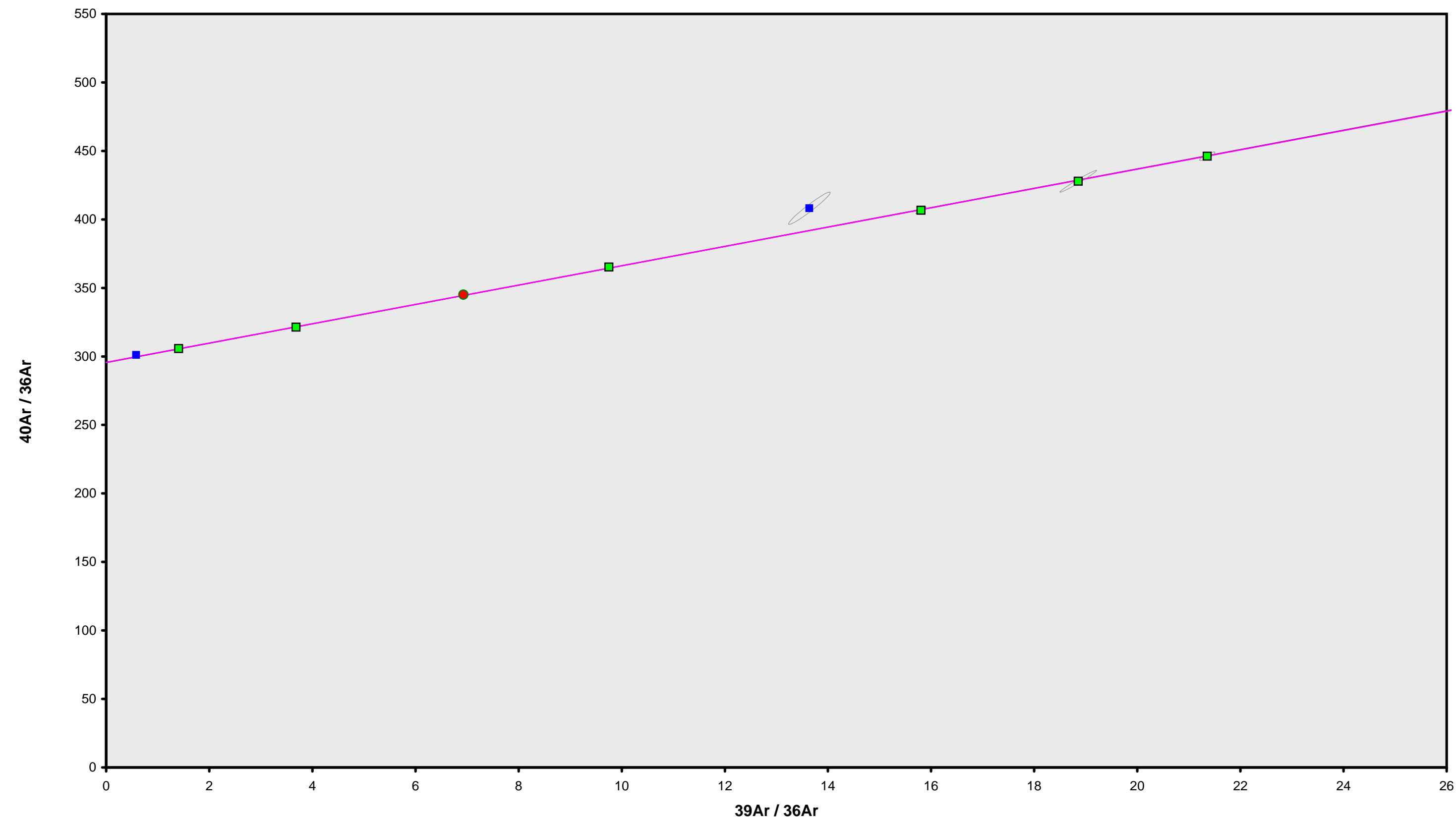
IRR = OSU2C13

J = 0.00154115  $\pm$  0.00000405

RECALIBRATED AGE



13C2101.AGE >>> 205-2 >>> KERGUELEN PROJECT



**Ar-Ages in Ma**

**WEIGHTED PLATEAU**  
19.54 ± 0.21

**TOTAL FUSION**  
19.79 ± 0.24

**NORMAL ISOCHRON**  
19.50 ± 0.29

**INVERSE ISOCHRON**  
19.50 ± 0.29

**MSWD (PROBABILITY)**  
0.49 (74%)

**40AR/36AR INTERCEPT**  
295.7 ± 0.9

**Sample Info**

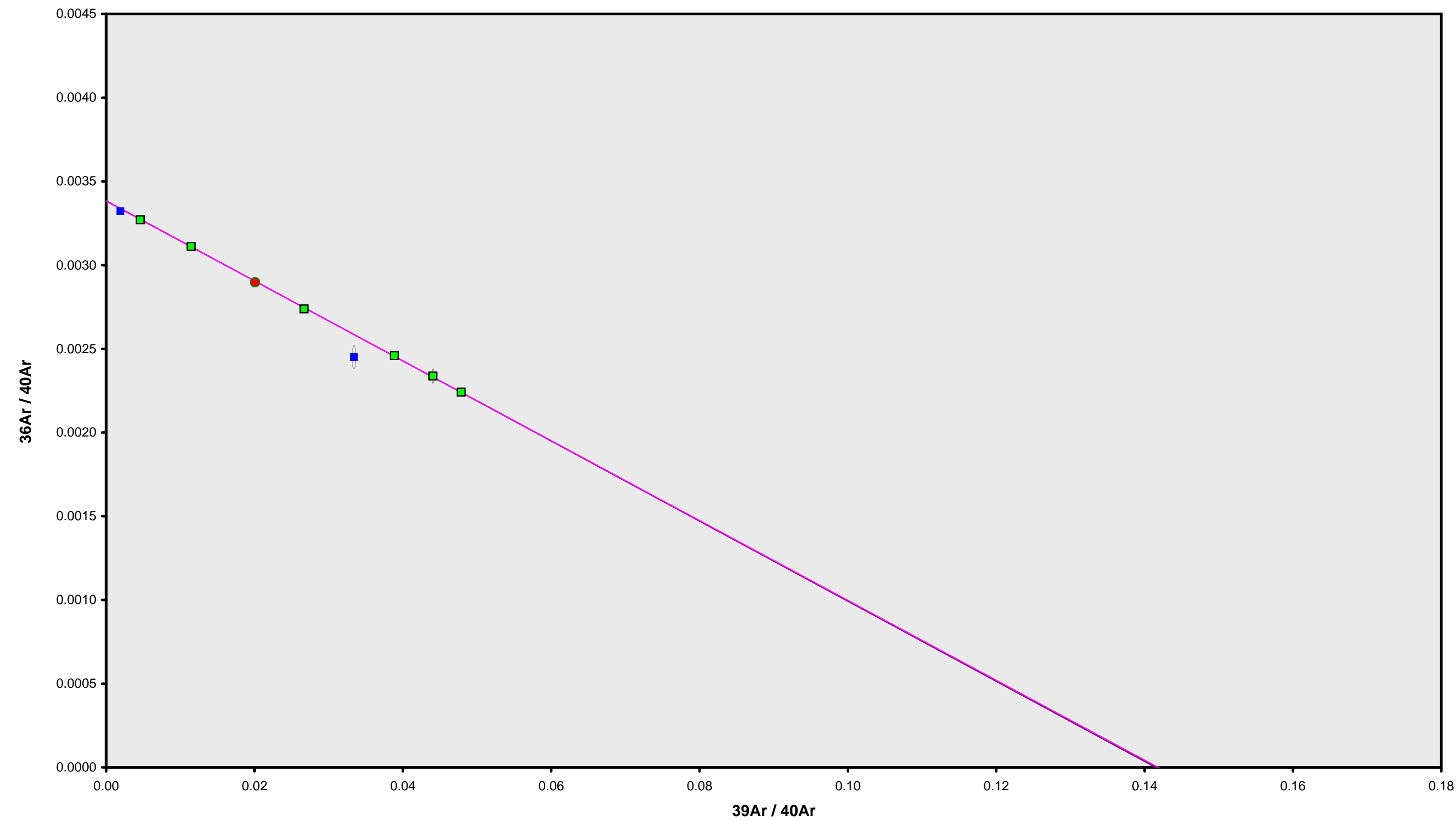
Groundmass  
Kerguelen Plateau  
Kyle Krawl

IRR = OSU2C13  
J = 0.00154115 ± 0.00000405

**RECALIBRATED AGE**



13C2101.AGE >>> 205-2 >>> KERGUELEN PROJECT



Ar-Ages in Ma

WEIGHTED PLATEAU

19.54 ± 0.21

TOTAL FUSION

19.79 ± 0.24

NORMAL ISOCHRON

19.50 ± 0.29

INVERSE ISOCHRON

19.50 ± 0.29

MSWD (PROBABILITY)

0.49 (74%)

SPREADING FACTOR

30.5%

40AR/36AR INTERCEPT

295.7 ± 0.9

Sample Info

Groundmass

Kerguelen Plateau

Kyle Krawl

IRR = OSU2C13

J = 0.00154115 ± 0.00000405

RECALIBRATED AGE



Incremental Heating		36Ar(a) [V]	37Ar(ca) [V]	38Ar(cl) [V]	39Ar(k) [V]	40Ar(r) [V]	Age ± 2σ (Ma)	40Ar(r) (%)	39Ar(k) (%)	K/Ca ± 2σ
13C2088	500 °C	0.0170231	0.0124717	0.0002031	0.0103306	0.1577466	42.38 ± 6.16	3.04	1.05	0.36 ± 0.03
13C2090	600 °C	0.0188862	0.0497393	0.0003427	0.0453937	0.4452493	27.34 ± 1.11	7.39	4.60	0.39 ± 0.02
13C2091	700 °C ✓	0.0065594	0.0808431	0.0000090	0.0874854	0.6276700	20.04 ± 0.46	24.46	8.86	0.47 ± 0.02
13C2093	800 °C ✓	0.0024447	0.1239432	0.0000912	0.1741252	1.2324706	19.77 ± 0.15	63.04	17.64	0.60 ± 0.03
13C2094	900 °C ✓	0.0008154	0.1160810	0.0002233	0.2073490	1.4614139	19.69 ± 0.17	85.84	21.01	0.77 ± 0.03
13C2096	1050 °C ✓	0.0003725	0.1311458	0.0006073	0.2753243	1.9310503	19.59 ± 0.10	94.59	27.89	0.90 ± 0.04
13C2097	1250 °C ✓	0.0001330	0.1168199	0.0005113	0.1551181	1.0892475	19.61 ± 0.20	96.50	15.72	0.57 ± 0.03
13C2099	1400 °C ✓	0.0000528	0.0311212	0.0001393	0.0318952	0.2271900	19.89 ± 0.97	93.57	3.23	0.44 ± 0.02
Σ		0.0462869	0.6621651	0.0021272	0.9870214	7.1720383				

Information on Analysis	Results	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD	39Ar(k) (%,n)	K/Ca ± 2σ
Sample = 205-1 Material = Groundmass Location = Kerguelen Plateau Analyst = Kyle Krawl Project = KERGUELEN Mass Discrimination Law = LIN Irradiation = OSU2C13 J = 0.00155670 ± 0.00000405 FCT-3 = 28.201 ± 0.023 Ma	Age Plateau	7.03902 ± 0.03008	19.66 ± 0.13	1.43	94.35	0.56 ± 0.12
	Recalibrated	± 0.43%	± 0.67%	21%	6	
			Full External Error ± 0.46	2.26	2σ Confidence Limit	
			Analytical Error ± 0.08	1.1947	Error Magnification	
	Total Fusion Age	7.26634 ± 0.04143	20.29 ± 0.16		8	0.64 ± 0.01
	Recalibrated	± 0.57%	± 0.77%			
			Full External Error ± 0.48			
			Analytical Error ± 0.12			



Normal Isochron		39(k)/36(a) ± 2σ		40(a+r)/36(a) ± 2σ	r.i.
13C2088	500 °C		0.61 ± 0.01	304.77 ± 1.40	0.3742
13C2090	600 °C		2.40 ± 0.01	319.08 ± 1.03	0.6892
13C2091	700 °C	✓	13.34 ± 0.10	391.19 ± 2.90	0.9517
13C2093	800 °C	✓	71.23 ± 0.91	799.65 ± 10.26	0.9949
13C2094	900 °C	✓	254.31 ± 12.44	2087.86 ± 102.04	0.9988
13C2096	1050 °C	✓	739.18 ± 67.36	5479.89 ± 499.34	0.9999
13C2097	1250 °C	✓	1166.38 ± 323.53	8485.87 ± 2353.79	1.0000
13C2099	1400 °C	✓	604.52 ± 426.86	4601.54 ± 3249.05	1.0000

Results	40(a)/36(a) ± 2σ		40(r)/39(k) ± 2σ		Age ± 2σ (Ma)	MSWD
Normal Isochron No Convergence	298.00 ± 2.15 ± 0.72%		7.02292 ± 0.02825 ± 0.40%	19.62 ± 0.13 ± 0.65%	0.42	
					80%	
				Full External Error ± 0.46		
				Analytical Error ± 0.08		
Statistics	2σ Confidence Limit	2.41	Convergence	0.000001049610		
	Error Magnification	1.0000	Number of Iterations	500		
	Number of Data Points	6	Calculated Line	Weighted York-2		



Inverse Isochron		39(k)/40(a+r) ± 2σ		36(a)/40(a+r) ± 2σ	r.i.
13C2088	500 °C	0.0019912 ± 0.0000205		0.00328120 ± 0.00001504	0.0411
13C2090	600 °C	0.0075328 ± 0.0000228		0.00313406 ± 0.00001014	0.1237
13C2091	700 °C ✓	0.0340943 ± 0.0000812		0.00255630 ± 0.00001892	0.0106
13C2093	800 °C ✓	0.0890727 ± 0.0001150		0.00125055 ± 0.00001605	0.0450
13C2094	900 °C ✓	0.1218015 ± 0.0002921		0.00047896 ± 0.00002341	0.0112
13C2096	1050 °C ✓	0.1348891 ± 0.0001623		0.00018249 ± 0.00001663	0.0032
13C2097	1250 °C ✓	0.1374495 ± 0.0002167		0.00011784 ± 0.00003269	0.0018
13C2099	1400 °C ✓	0.1313743 ± 0.0008948		0.00021732 ± 0.00015344	0.0014

Results	40(a)/36(a) ± 2σ		40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD
Inverse Isochron Recalibrated	297.99 ± 2.16		7.02364 ± 0.02867	19.62 ± 0.13	0.43
	± 0.72%		± 0.41%	± 0.66%	79%
			Full External Error ± 0.46		
			Analytical Error ± 0.08		
Statistics	2σ Confidence Limit	2.41	Convergence	0.0000002297	
	Error Magnification	1.0000	Number of Iterations	3	
	Number of Data Points	6	Calculated Line	Weighted York-2	
	Spreading Factor	72.6%			



OSU Argon Geochronology Lab																
Relative Abundances		40Ar [V]	1σ	39Ar [V]	1σ	38Ar [V]	1σ	37Ar [V]	1σ	36Ar [V]	1σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	40Ar(r) (%)	39Ar(k) (%)	K/Ca ± 2σ
13C2088	500 °C	5.188070	0.0036154	0.0103389	0.0000528	0.0035040	0.0000413	0.0124717	0.0004767	0.0170264	0.0000372	15.26991 ± 2.24447	42.38 ± 6.16	3.04	1.05	0.36 ± 0.03
13C2090	600 °C	6.026172	0.0033203	0.0454272	0.0000641	0.0043960	0.0000245	0.0497393	0.0011938	0.0188994	0.0000287	9.80860 ± 0.40272	27.34 ± 1.11	7.39	4.60	0.39 ± 0.02
13C2091	700 °C	2.566072	0.0005546	0.0875398	0.0001024	0.0022418	0.0000360	0.0808431	0.0018102	0.0065808	0.0000242	7.17457 ± 0.16507	20.04 ± 0.46	24.46	8.86	0.47 ± 0.02
13C2093	800 °C	1.955043	0.0008442	0.1742086	0.0000835	0.0025469	0.0000295	0.1239432	0.0027795	0.0024774	0.0000156	7.07807 ± 0.05442	19.77 ± 0.15	63.04	17.64	0.60 ± 0.03
13C2094	900 °C	1.702561	0.0009756	0.2074271	0.0002184	0.0027514	0.0000245	0.1160810	0.0026194	0.0008460	0.0000199	7.04809 ± 0.05943	19.69 ± 0.17	85.84	21.01	0.77 ± 0.03
13C2096	1050 °C	2.041394	0.0006073	0.2754125	0.0001439	0.0038283	0.0000267	0.1311458	0.0029423	0.0004072	0.0000170	7.01373 ± 0.03742	19.59 ± 0.10	94.59	27.89	0.90 ± 0.04
13C2097	1250 °C	1.128703	0.0004959	0.1551967	0.0001015	0.0023176	0.0000211	0.1168199	0.0026206	0.0001639	0.0000184	7.02205 ± 0.07116	19.61 ± 0.20	96.50	15.72	0.57 ± 0.03
13C2099	1400 °C	0.242813	0.0003096	0.0319161	0.0001007	0.0005165	0.0000301	0.0311212	0.0007477	0.0000610	0.0000186	7.12302 ± 0.34860	19.89 ± 0.97	93.57	3.23	0.44 ± 0.02

Σ	20.850828	0.0051748	0.9874671	0.0003365	0.0221025	0.0000845	0.6621651	0.0059666	0.0464622	0.0000664						
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Information on Analysis and Constants Used in Calculations	
Sample = 205-1	
Material = Groundmass	
Location = Kerguelen Plateau	
Analyst = Kyle Krawl	
Project = KERGUELEN	
Mass Discrimination Law = LIN	
Irradiation = OSU2C13	
J = 0.00155670 ± 0.00000405	
FCT-3 = 28.201 ± 0.023 Ma	
IGSN = Undefined	
Preferred Age = Undefined	
Classification = Undefined	
Experiment Type = Undefined	
Extraction Method = Undefined	
Heating = 0 sec	
Isolation = 15.00 min	
Instrument = MAP215-50	
Lithology = Undefined	
Lat-Lon = Undefined - Undefined	
R1 ratio = Undefined	
R2 ratio = Undefined	
R3 ratio = Undefined	
R4 ratio = Undefined	
R5 ratio = Undefined	
Collector Calibrations =	

Results	40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD	39Ar(k) (%,n)	K/Ca ± 2σ
Age Plateau Recalibrated		7.03902 ± 0.03008 ± 0.43%	19.66 ± 0.13 ± 0.67%	1.43 21%	94.35 6	0.56 ± 0.12
		Full External Error ± 0.46		2.26	2σ Confidence Limit	
		Analytical Error ± 0.08		1.1947	Error Magnification	
Total Fusion Age Recalibrated		7.26634 ± 0.04143 ± 0.57%	20.29 ± 0.16 ± 0.77%		8	0.64 ± 0.01
		Full External Error ± 0.48				
		Analytical Error ± 0.12				
Normal Isochron No Convergence	298.00 ± 2.15 ± 0.72%	7.02292 ± 0.02825 ± 0.40%	19.62 ± 0.13 ± 0.65%	0.42 80%	94.35 6	
		Full External Error ± 0.46		2.41	2σ Confidence Limit	
		Analytical Error ± 0.08		1.0000	Error Magnification	
				500	Number of Iterations	
				0.0000010496	Convergence	
Inverse Isochron Recalibrated	297.99 ± 2.16 ± 0.72%	7.02364 ± 0.02867 ± 0.41%	19.62 ± 0.13 ± 0.66%	0.43 79%	94.35 6	
		Full External Error ± 0.46		2.41	2σ Confidence Limit	
		Analytical Error ± 0.08		1.0000	Error Magnification	
				3	Number of Iterations	
				0.0000002297	Convergence	
				73%	Spreading Factor	



OSU Argon Geochronology Lab																																		
Degassing Patterns		36Ar(a) [V]	%1σ	36Ar(c) [V]	%1σ	36Ar(ca) [V]	%1σ	36Ar(cl) [V]	%1σ	37Ar(ca) [V]	%1σ	38Ar(a) [V]	%1σ	38Ar(c) [V]	%1σ	38Ar(k) [V]	%1σ	38Ar(ca) [V]	%1σ	38Ar(cl) [V]	%1σ	39Ar(k) [V]	%1σ	39Ar(ca) [V]	%1σ	40Ar(r) [V]	%1σ	40Ar(a) [V]	%1σ	40Ar(c) [V]	%1σ	40Ar(k) [V]	%1σ	
	13C2088	500 °C	0.0170231	0.22	0.0000000	0.00	0.0000033	3.82	0.0000000	21.32	0.0124717	3.82	0.0031816	0.22	0.0000000	0.00	0.0001176	0.51	0.0000017	3.82	0.0002031	21.99	0.0103306	0.51	0.0000084	3.82	0.1577466	7.33	5.030313	0.22	0.0000000	0.00	0.0000104	0.51
	13C2090	600 °C	0.0188862	0.15	0.0000000	0.00	0.0000131	2.40	0.0000001	9.10	0.0497393	2.40	0.0035298	0.15	0.0000000	0.00	0.0005166	0.14	0.0000069	2.40	0.0003427	10.57	0.0453937	0.14	0.0000335	2.40	0.4452493	2.05	5.580877	0.15	0.0000000	0.00	0.0000458	0.14
	13C2091	700 °C	✓ 0.0065594	0.37	0.0000000	0.00	0.0000213	2.24	0.0000000	401.70	0.0808431	2.24	0.0012260	0.37	0.0000000	0.00	0.0009956	0.12	0.0000112	2.24	0.0000090	401.73	0.0874854	0.12	0.0000544	2.24	0.6276700	1.14	1.938313	0.37	0.0000000	0.00	0.0000884	0.12
	13C2093	800 °C	✓ 0.0024447	0.64	0.0000000	0.00	0.0000327	2.24	0.0000000	33.01	0.1239432	2.24	0.0004569	0.64	0.0000000	0.00	0.0019815	0.05	0.0000172	2.24	0.0000912	33.44	0.1741252	0.05	0.0000834	2.24	1.2324706	0.38	0.722396	0.64	0.0000000	0.00	0.0001759	0.05
	13C2094	900 °C	✓ 0.0008154	2.44	0.0000000	0.00	0.0000306	2.26	0.0000000	12.40	0.1160810	2.26	0.0001524	2.44	0.0000000	0.00	0.0023596	0.11	0.0000161	2.26	0.0002233	13.52	0.2073490	0.11	0.0000781	2.26	1.4614139	0.41	0.240938	2.44	0.0000000	0.00	0.0002094	0.11
	13C2096	1050 °C	✓ 0.0003725	4.56	0.0000000	0.00	0.0000346	2.24	0.0000001	6.97	0.1311458	2.24	0.0000696	4.56	0.0000000	0.00	0.0031332	0.05	0.0000182	2.24	0.0006073	8.81	0.2753243	0.05	0.0000883	2.24	1.9310503	0.26	0.110066	4.56	0.0000000	0.00	0.0002781	0.05
	13C2097	1250 °C	✓ 0.0001330	13.87	0.0000000	0.00	0.0000308	2.24	0.0000001	6.82	0.1168199	2.24	0.0000249	13.87	0.0000000	0.00	0.0017652	0.07	0.0000162	2.24	0.0005113	8.69	0.1551181	0.07	0.0000786	2.24	1.0892475	0.50	0.039299	13.87	0.0000000	0.00	0.0001567	0.07
	13C2099	1400 °C	✓ 0.0000528	35.30	0.0000000	0.00	0.0000082	2.40	0.0000000	22.41	0.0311212	2.40	0.0000099	35.30	0.0000000	0.00	0.0003630	0.32	0.0000043	2.40	0.0001393	23.04	0.0318952	0.32	0.0000209	2.40	0.2271900	2.43	0.015591	35.30	0.0000000	0.00	0.0000322	0.32
		Σ	0.0462869	0.14	0.0000000	0.00	0.0001748	0.90	0.0000005	4.66	0.6621651	0.90	0.0086510	0.14	0.0000000	0.00	0.0112323	0.03	0.0000920	0.90	0.0021272	5.22	0.9870214	0.03	0.0004456	0.90	7.1720383	0.28	13.677793	0.14	0.0000000	0.00	0.0009969	0.03
	Σ							0.0464622	0.14	0.6621651	0.90									0.0221025	0.51			0.9874671	0.03							20.850828	0.14	



Additional Parameters		40Ar/39Ar	1σ	37Ar/39Ar	1σ	36Ar/39Ar	1σ	Time (days)	37Ar (decay)	39Ar (decay)	40Ar (moles)
13C2088	500 °C	501.798666	2.587136	1.206281	0.046516	1.646821	0.009149	111.650	9.095491	1.00078900	1.038E-12
13C2090	600 °C	132.655543	0.200978	1.094922	0.026324	0.416037	0.000863	111.686	9.101981	1.00078925	1.205E-12
13C2091	700 °C ✓	29.313204	0.034866	0.923501	0.020707	0.075175	0.000290	111.703	9.105102	1.00078937	5.132E-13
13C2093	800 °C ✓	11.222422	0.007241	0.711464	0.015959	0.014221	0.000090	111.738	9.111349	1.00078962	3.910E-13
13C2094	900 °C ✓	8.207995	0.009839	0.559623	0.012642	0.004079	0.000096	111.756	9.114474	1.00078974	3.405E-13
13C2096	1050 °C ✓	7.412133	0.004457	0.476179	0.010686	0.001479	0.000062	111.791	9.120852	1.00078999	4.083E-13
13C2097	1250 °C ✓	7.272725	0.005730	0.752722	0.016893	0.001056	0.000119	111.808	9.123981	1.00079011	2.257E-13
13C2099	1400 °C ✓	7.607853	0.025894	0.975093	0.023628	0.001911	0.000584	111.849	9.131242	1.00079040	4.856E-14



Procedure Blanks		36Ar [V]	1σ	37Ar [V]	1σ	38Ar [V]	1σ	39Ar [V]	1σ	40Ar [V]	1σ
13C2088	500 °C	0.0002993	0.0000150	0.0000104	0.0000141	0.0000186	0.0000146	0.0000271	0.0000304	0.0029548	0.0002230
13C2090	600 °C	0.0002867	0.0000150	0.0000302	0.0000141	0.0000187	0.0000146	0.0000413	0.0000304	0.0036614	0.0002230
13C2091	700 °C	0.0002845	0.0000150	0.0000368	0.0000141	0.0000188	0.0000146	0.0000481	0.0000304	0.0036739	0.0002230
13C2093	800 °C	0.0002861	0.0000150	0.0000443	0.0000141	0.0000189	0.0000146	0.0000617	0.0000304	0.0034544	0.0002230
13C2094	900 °C	0.0002890	0.0000150	0.0000453	0.0000141	0.0000189	0.0000146	0.0000686	0.0000304	0.0033771	0.0002230
13C2096	1050 °C	0.0002974	0.0000150	0.0000412	0.0000141	0.0000190	0.0000146	0.0000825	0.0000304	0.0036895	0.0002230
13C2097	1250 °C	0.0003020	0.0000150	0.0000364	0.0000141	0.0000191	0.0000146	0.0000893	0.0000304	0.0042315	0.0002230
13C2099	1400 °C	0.0003109	0.0000150	0.0000178	0.0000141	0.0000192	0.0000146	0.0001051	0.0000304	0.0070063	0.0002230



OSU Argon Geochronology Lab																						
Intercept Values		36Ar [V]	1σ	r2		37Ar [V]	1σ	r2		38Ar [V]	1σ	r2		39Ar [V]	1σ	r2		40Ar [V]	1σ	r2		
	13C2088	500 °C	0.0179838	0.0000355	0.9930	LIN #	0.0014220	0.0000417	0.9613	EXP #	0.0035935	0.0000395	0.3518	LIN #	0.0104716	0.0000438	0.9999	EXP #	5.2003854	0.0036150	0.9984	EXP #
	13C2090	600 °C	0.0199205	0.0000258	0.9969	LIN #	0.0056568	0.0000509	0.6862	EXP #	0.0045046	0.0000203	0.4491	LIN #	0.0459413	0.0000572	0.9998	EXP #	6.0419176	0.0033194	0.9988	EXP #
	13C2091	700 °C	0.0071200	0.0000202	0.9784	LIN #	0.0091769	0.0000304	0.9730	LIN #	0.0023060	0.0000337	0.1130	LIN #	0.0884813	0.0000988	0.9674	LIN # 2 3	2.5743796	0.0005087	0.9999	EXP # 1
	13C2093	800 °C	0.0028600	0.0000060	0.9842	EXP # 1 2 4 6 7	0.0140491	0.0000518	0.9883	LIN # 1 4 5	0.0026176	0.0000264	0.6866	LIN #	0.1760658	0.0000786	0.9998	EXP # 2 8 9	1.9622255	0.0008158	0.9996	EXP # 1 2
	13C2094	900 °C	0.0011685	0.0000142	0.8897	LIN # 2 3 4 10	0.0131585	0.0000582	0.9750	LIN #	0.0028266	0.0000203	0.8998	LIN # 3	0.2096545	0.0002185	0.9987	EXP # 5	1.7093567	0.0009517	0.9990	EXP #
	13C2096	1050 °C	0.0007210	0.0000091	0.9888	LIN # 2 5 6 8	0.0148444	0.0000549	0.9794	LIN #	0.0039252	0.0000230	0.9313	LIN #	0.2783334	0.0001421	0.9997	EXP # 2	2.0489770	0.0005659	0.9998	EXP # 2
	13C2097	1250 °C	0.0004728	0.0000118	0.9779	EXP # 2 3 6 7	0.0132180	0.0000480	0.9845	EXP #	0.0023838	0.0000158	0.8532	LIN #	0.1568855	0.0000979	0.9994	EXP #	1.1350913	0.0004438	0.9996	EXP # 2 3 7
	13C2099	1400 °C	0.0003749	0.0000121	0.8120	LIN # 3 8 9	0.0035270	0.0000297	0.9537	EXP #	0.0005463	0.0000270	0.1509	LIN #	0.0323536	0.0000971	0.9837	EXP #	0.2503199	0.0002152	0.9963	EXP # 2 3 8



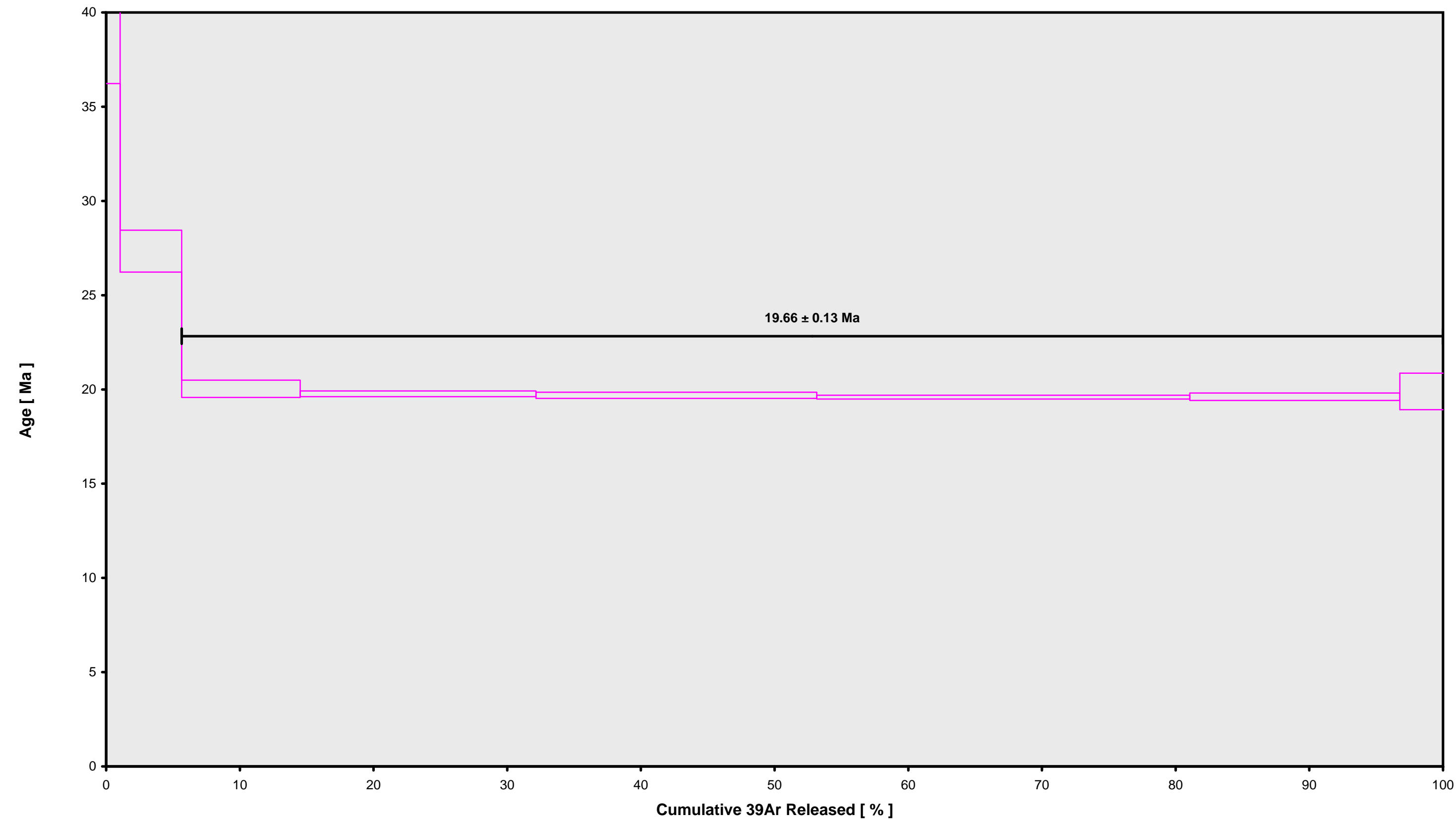
OSU Argon Geochronology Lab																																		
Sample Parameters			Sample	Material	Location	Analyst	Temp	Standard Name	Standard (in Ma)	%1σ	Standard Reference	Standard 40Ar/39Ar	%1σ	J	%1σ	Air 40Ar/36Ar	%1σ	MDF	%1σ	Volume Ratio	Sensitivity (mol/volt)	Day	Month	Year	Hour	Min	Resist	Irradiation	X-pos	Y-pos	Z/H-pos	Project	Experiment	Nmb
	13C2088	500 °C	205-1	Groundmass	Kerguelen Plateau	Kyle Krawl	500	FCT-3	28.201	0.083	Kuiper et al., 2008			0.00155670	0.260			1.0092	0.001	0.9982	2E-13	26	JUL	2013	7	37	1	OSU2C13	0.00	0.00	44.30	Kerguelen	13C2088	01
	13C2090	600 °C	205-1	Groundmass	Kerguelen Plateau	Kyle Krawl	600	FCT-3	28.201	0.083	Kuiper et al., 2008			0.00155670	0.260			1.0092	0.001	0.998	2E-13	26	JUL	2013	8	29	1	OSU2C13	0.00	0.00	44.30	Kerguelen	13C2088	01
	13C2091	700 °C	205-1	Groundmass	Kerguelen Plateau	Trevor Smith	700	FCT-3	28.201	0.083	Kuiper et al., 2008			0.00155670	0.260			1.0092	0.001	0.9982	2E-13	26	JUL	2013	8	54	1	OSU2C13	0.00	0.00	44.30	Kerguelen	13C2088	01
	13C2093	800 °C	205-1	Groundmass	Kerguelen Plateau	Trevor Smith	800	FCT-3	28.201	0.083	Kuiper et al., 2008			0.00155670	0.260			1.0092	0.001	0.9981	2E-13	26	JUL	2013	9	44	1	OSU2C13	0.00	0.00	44.30	Kerguelen	13C2088	01
	13C2094	900 °C	205-1	Groundmass	Kerguelen Plateau	Trevor Smith	900	FCT-3	28.201	0.083	Kuiper et al., 2008			0.00155670	0.260			1.0092	0.001	0.998	2E-13	26	JUL	2013	10	9	1	OSU2C13	0.00	0.00	44.30	Kerguelen	13C2088	01
	13C2096	1050 °C	205-1	Groundmass	Kerguelen Plateau	Trevor Smith	1050	FCT-3	28.201	0.083	Kuiper et al., 2008			0.00155670	0.260			1.0092	0.001	0.9981	2E-13	26	JUL	2013	11	0	1	OSU2C13	0.00	0.00	44.30	Kerguelen	13C2088	01
	13C2097	1250 °C	205-1	Groundmass	Kerguelen Plateau	Trevor Smith	1250	FCT-3	28.201	0.083	Kuiper et al., 2008			0.00155670	0.260			1.0092	0.001	0.9981	2E-13	26	JUL	2013	11	25	1	OSU2C13	0.00	0.00	44.30	Kerguelen	13C2088	01
	13C2099	1400 °C	205-1	Groundmass	Kerguelen Plateau	Trevor Smith	1400	FCT-3	28.201	0.083	Kuiper et al., 2008			0.00155670	0.260			1.0092	0.001	0.998	2E-13	26	JUL	2013	12	23	1	OSU2C13	0.00	0.00	44.30	Kerguelen	13C2088	01



Irradiation Constants		OSU Argon Geochronology Lab																										
		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	
13C2088	500 °C	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0	
13C2090	600 °C	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0	
13C2091	700 °C	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0	
13C2093	800 °C	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0	
13C2094	900 °C	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0	
13C2096	1050 °C	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0	
13C2097	1250 °C	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0	
13C2099	1400 °C	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0	



13C2088.AGE >>> 205-1 >>> KERGUELEN PROJECT



Ar-Ages in Ma

WEIGHTED PLATEAU

$19.66 \pm 0.13$

TOTAL FUSION

$20.29 \pm 0.16$

NORMAL ISOCHRON

$19.62 \pm 0.13$

INVERSE ISOCHRON

$19.62 \pm 0.13$

MSWD (PROBABILITY)

1.43 (21%)

Sample Info

Groundmass

Kerguelen Plateau

Kyle Krawl

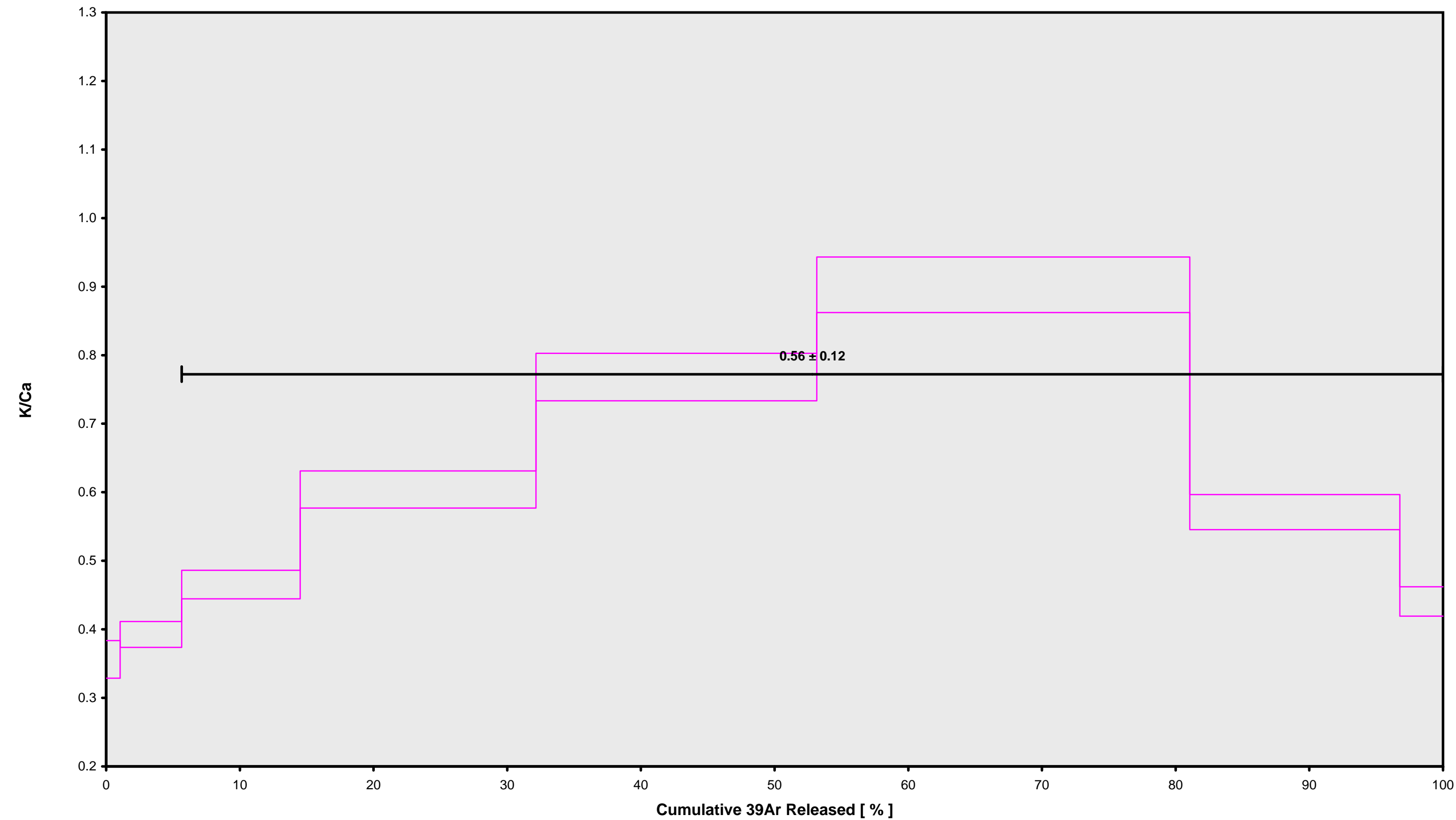
IRR = OSU2C13

J =  $0.00155670 \pm 0.00000405$

RECALIBRATED AGE



13C2088.AGE >>> 205-1 >>> KERGUELEN PROJECT



**Ar-Ages in Ma**

**WEIGHTED PLATEAU**  
 $19.66 \pm 0.13$

**TOTAL FUSION**  
 $20.29 \pm 0.16$

**NORMAL ISOCHRON**  
 $19.62 \pm 0.13$

**INVERSE ISOCHRON**  
 $19.62 \pm 0.13$

**Sample Info**

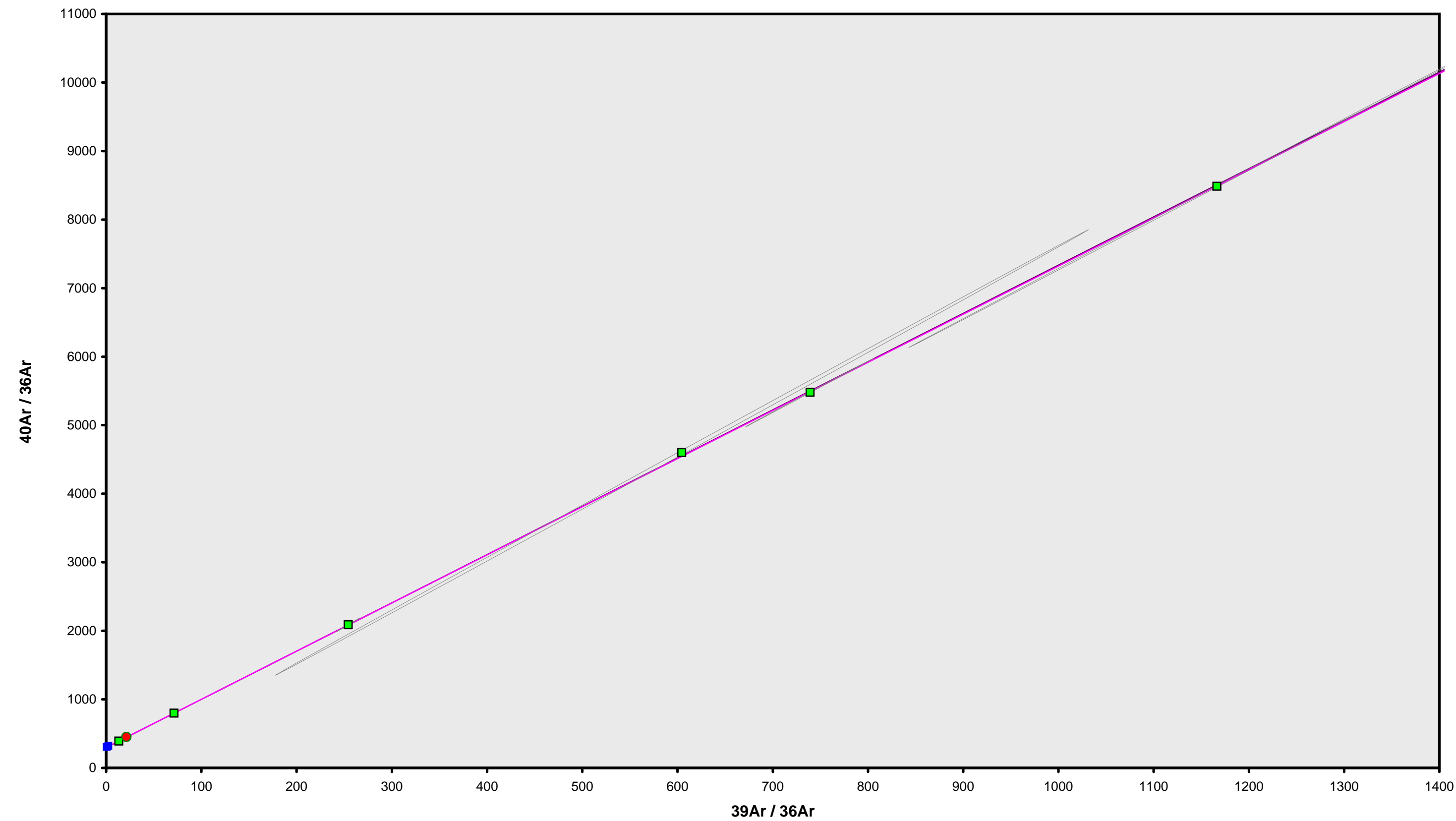
Groundmass  
Kerguelen Plateau  
Kyle Krawl

IRR = OSU2C13  
J =  $0.00155670 \pm 0.00000405$

**RECALIBRATED AGE**



13C2088.AGE >>> 205-1 >>> KERGUELEN PROJECT



**Ar-Ages in Ma**

**WEIGHTED PLATEAU**  
19.66 ± 0.13

**TOTAL FUSION**  
20.29 ± 0.16

**NORMAL ISOCHRON**  
19.62 ± 0.13

**INVERSE ISOCHRON**  
19.62 ± 0.13

**MSWD (PROBABILITY)**  
0.42 (80%)

**40AR/36AR INTERCEPT**  
298.0 ± 2.2

**Sample Info**

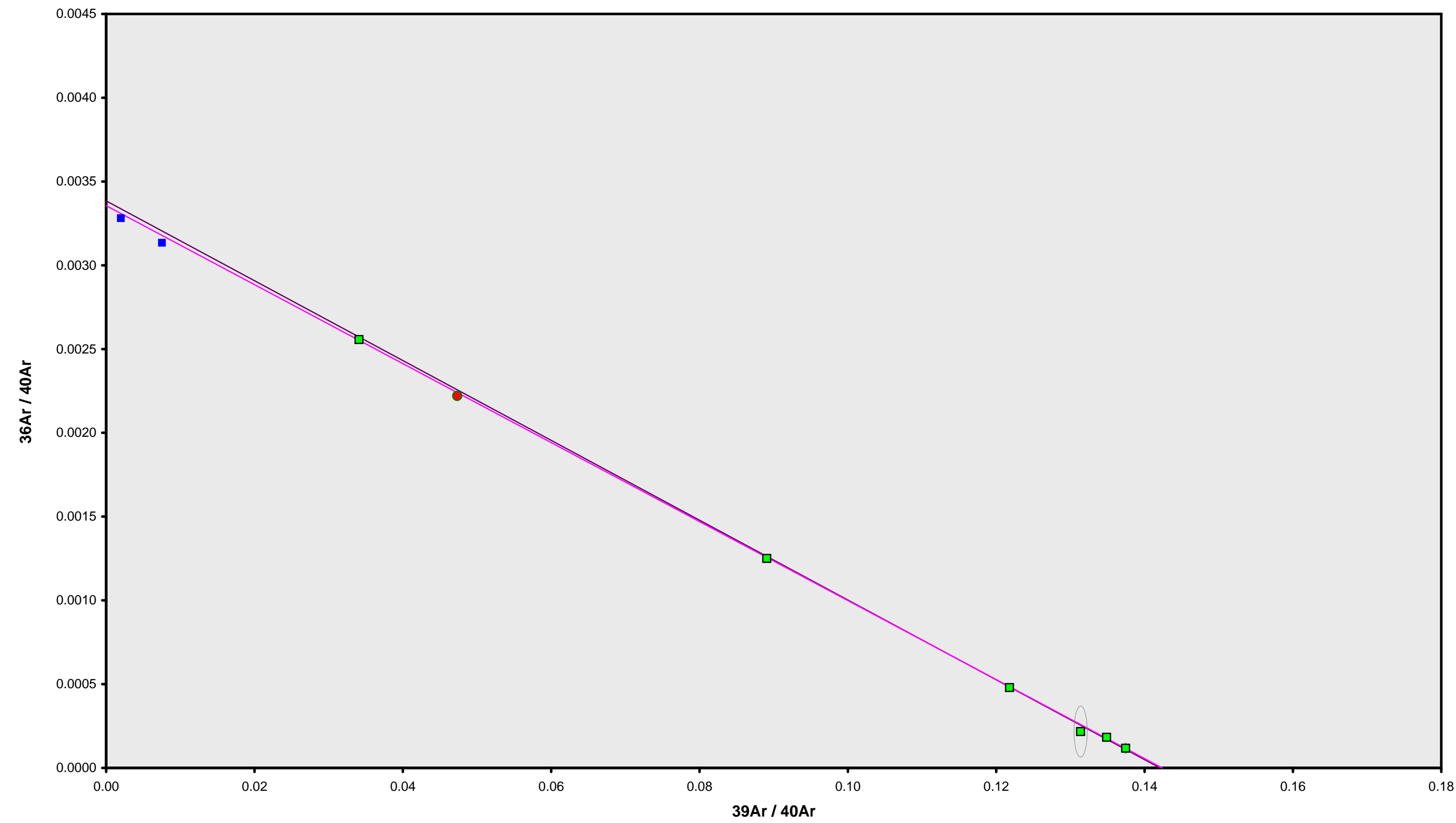
Groundmass  
Kerguelen Plateau  
Kyle Krawl

IRR = OSU2C13  
J = 0.00155670 ± 0.00000405

**RECALIBRATED AGE**



13C2088.AGE >>> 205-1 >>> KERGUELEN PROJECT



**Ar-Ages in Ma**

**WEIGHTED PLATEAU**  
19.66 ± 0.13

**TOTAL FUSION**  
20.29 ± 0.16

**NORMAL ISOCHRON**  
19.62 ± 0.13

**INVERSE ISOCHRON**  
19.62 ± 0.13

**MSWD (PROBABILITY)**  
0.43 (79%)

**SPREADING FACTOR**  
72.6%

**40AR/36AR INTERCEPT**  
298.0 ± 2.2

**Sample Info**

Groundmass  
Kerguelen Plateau  
Kyle Krawl

IRR = OSU2C13  
J = 0.00155670 ± 0.00000405

**RECALIBRATED AGE**



Incremental Heating			36Ar(a) [V]	37Ar(ca) [V]	38Ar(cl) [V]	39Ar(k) [V]	40Ar(r) [V]	Age ± 2σ (Ka)	40Ar(r) (%)	39Ar(k) (%)	K/Ca ± 2σ
13C2073	500 °C	✓	0.0004826	0.0065492	0.0003116	0.0164152	0.0030265	523.1 ± 1644.6	2.08	1.63	1.08 ± 0.09
13C2075	600 °C	✓	0.0012170	0.0404964	0.0018764	0.1005498	0.0093776	264.6 ± 348.5	2.54	9.97	1.07 ± 0.05
13C2076	700 °C	✓	0.0007276	0.0610081	0.0024609	0.1414194	0.0029311	58.8 ± 210.0	1.34	14.02	1.00 ± 0.04
13C2078	800 °C	✓	0.0007436	0.0940592	0.0034157	0.2111416	0.0068076	91.5 ± 184.6	3.00	20.93	0.97 ± 0.04
13C2079	900 °C	✓	0.0005299	0.0728682	0.0023789	0.1526542	0.0173640	322.7 ± 255.3	9.97	15.13	0.90 ± 0.04
13C2081	1050 °C	✓	0.0006936	0.0910591	0.0020307	0.1313725	0.0083526	180.4 ± 215.8	3.91	13.02	0.62 ± 0.03
13C2082	1250 °C	✓	0.0013605	0.2326784	0.0026208	0.1843204	0.0124836	192.2 ± 231.1	3.01	18.27	0.34 ± 0.01
13C2084	1400 °C	✓	0.0004252	0.1148307	0.0009863	0.0707494	0.0063803	255.9 ± 346.1	4.83	7.01	0.26 ± 0.01

	Σ		0.0061801	0.7135494	0.0160815	1.0086225	0.0667234				
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Information on Analysis	Results	40(r)/39(k) ± 2σ	Age ± 2σ (Ka)	MSWD	39Ar(k) (% ,n)	K/Ca ± 2σ
Sample = 274-2 Material = Groundmass Location = Kerguelen Plateau Analyst = Trevor Smith Project = KERGUELEN Mass Discrimination Law = LIN Irradiation = OSU2C13 J = 0.00157287 ± 0.00001274 FCT-3 = 28.201 ± 0.023 Ma	Age Plateau					
	Recalibrated	0.05929 ± 0.03158 ± 53.27%	168.2 ± 89.7 ± 53.29%	0.58 77%	100.00 8	0.42 ± 0.19
			Full External Error ± 89.7	2.07	2σ Confidence Limit	
			Analytical Error ± 89.6	1.0000	Error Magnification	
	Total Fusion Age					
	Recalibrated	0.06615 ± 0.03332 ± 50.37%	187.7 ± 94.6 ± 50.40%		8	0.61 ± 0.01
			Full External Error ± 94.7			
			Analytical Error ± 94.5			



Normal Isochron			39(k)/36(a) ± 2σ	40(a+r)/36(a) ± 2σ	r.i.
13C2073	500 °C	✓	34.01 ± 2.26	301.77 ± 20.13	0.9894
13C2075	600 °C	✓	82.62 ± 2.84	303.21 ± 10.41	0.9895
13C2076	700 °C	✓	194.36 ± 9.41	299.53 ± 14.58	0.9889
13C2078	800 °C	✓	283.94 ± 17.74	304.65 ± 19.04	0.9930
13C2079	900 °C	✓	288.08 ± 25.22	328.27 ± 28.78	0.9955
13C2081	1050 °C	✓	189.41 ± 9.21	307.54 ± 14.99	0.9886
13C2082	1250 °C	✓	135.48 ± 5.06	304.68 ± 11.38	0.9937
13C2084	1400 °C	✓	166.37 ± 11.35	310.50 ± 21.31	0.9886

Results	40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ka)	MSWD
Normal Isochron Recalibrated	300.72 ± 12.56 ± 4.17%	0.02843 ± 0.07639 ± 268.70%	80.7 ± 216.7	0.54
			± 268.70%	78%
			Full External Error ± 216.8	
			Analytical Error ± 216.7	
Statistics	2σ Confidence Limit	2.15	Convergence	0.000000000008
	Error Magnification	1.0000	Number of Iterations	7
	Number of Data Points	8	Calculated Line	Weighted York-2



Inverse Isochron		39(k)/40(a+r) ± 2σ		36(a)/40(a+r) ± 2σ	r.i.
13C2073	500 °C	✓	0.1127067 ± 0.0010928	0.00331377 ± 0.00022106	0.0999
13C2075	600 °C	✓	0.2724963 ± 0.0013538	0.00329809 ± 0.00011324	0.0755
13C2076	700 °C	✓	0.6488781 ± 0.0046882	0.00333858 ± 0.00016246	0.1089
13C2078	800 °C	✓	0.9319984 ± 0.0068962	0.00328241 ± 0.00020510	0.0595
13C2079	900 °C	✓	0.8775671 ± 0.0072665	0.00304629 ± 0.00026705	0.0629
13C2081	1050 °C	✓	0.6158834 ± 0.0045317	0.00325158 ± 0.00015843	0.0881
13C2082	1250 °C	✓	0.4446599 ± 0.0018583	0.00328218 ± 0.00012255	0.0520
13C2084	1400 °C	✓	0.5358164 ± 0.0055331	0.00322057 ± 0.00022102	0.1141

Results	40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ka)	MSWD
Inverse Isochron	300.26 ± 12.51	0.03308 ± 0.03184	93.9 ± 90.4	0.57
Clustered Points	± 4.17%	± 96.24%	± 96.25%	75%
			Full External Error ± 90.4	
			Analytical Error ± 90.3	
Statistics	2σ Confidence Limit	2.15	Convergence	0.0000000157
	Error Magnification	1.0000	Number of Iterations	4
	Number of Data Points	8	Calculated Line	Weighted York-2
	Spreading Factor	2.7%		



OSU Argon Geochronology Lab																	
Relative Abundances			40Ar		39Ar		38Ar		37Ar		36Ar		40(r)/39(k) ± 2σ	Age ± 2σ (Ka)	40Ar(r) (%)	39Ar(k) (%)	K/Ca ± 2σ
			[V]	1σ	[V]	1σ	[V]	1σ	[V]	1σ	[V]	1σ					
13C2073	500 °C	✓	0.1456615	0.0005853	0.0164196	0.0000445	0.0005895	0.0000274	0.0065492	0.0002872	0.0004844	0.0000160	0.18437 ± 0.57977	523.1 ± 1644.6	2.08	1.63	1.08 ± 0.09
13C2075	600 °C	✓	0.3690965	0.0006622	0.1005770	0.0001727	0.0032537	0.0000308	0.0404964	0.0009152	0.0012281	0.0000208	0.09326 ± 0.12284	264.6 ± 348.5	2.54	9.97	1.07 ± 0.05
13C2076	700 °C	✓	0.2180873	0.0006742	0.1414605	0.0002638	0.0042147	0.0000347	0.0610081	0.0013506	0.0007443	0.0000176	0.02073 ± 0.07400	58.8 ± 210.0	1.34	14.02	1.00 ± 0.04
13C2078	800 °C	✓	0.2267604	0.0005939	0.2112049	0.0005512	0.0059705	0.0000512	0.0940592	0.0020573	0.0007692	0.0000231	0.03224 ± 0.06504	91.5 ± 184.6	3.00	20.93	0.97 ± 0.04
13C2079	900 °C	✓	0.1741058	0.0005879	0.1527032	0.0003650	0.0042253	0.0000319	0.0728682	0.0016168	0.0005496	0.0000232	0.11375 ± 0.08999	322.7 ± 255.3	9.97	15.13	0.90 ± 0.04
13C2081	1050 °C	✓	0.2134401	0.0005993	0.1314338	0.0003120	0.0036681	0.0000339	0.0910591	0.0020031	0.0007181	0.0000168	0.06358 ± 0.07606	180.4 ± 215.8	3.91	13.02	0.62 ± 0.03
13C2082	1250 °C	✓	0.4147061	0.0005902	0.1844770	0.0002819	0.0050050	0.0000369	0.2326784	0.0050538	0.0014225	0.0000253	0.06773 ± 0.08146	192.2 ± 231.1	3.01	18.27	0.34 ± 0.01
13C2084	1400 °C	✓	0.1321118	0.0005936	0.0708267	0.0001797	0.0018869	0.0000330	0.1148307	0.0025138	0.0004558	0.0000145	0.09018 ± 0.12200	255.9 ± 346.1	4.83	7.01	0.26 ± 0.01

Σ			1.8939697	0.0017303	1.0091027	0.0008646	0.0288138	0.0001007	0.7135494	0.0067426	0.0063719	0.0000565				
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Information on Analysis and Constants Used in Calculations		Results						
		40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ka)	MSWD	39Ar(k) (%.n)	K/Ca ± 2σ	
Sample = 274-2	Age Equations = Min et al. (2000)							
Material = Groundmass	Negative Intensities = Allowed							
Location = Kerguelen Plateau	Decay Constant 40K = 5.543 ± 0.044 E-10 1/a							
Analyst = Trevor Smith	Decay Constant 39Ar = 2.940 ± 0.029 E-07 1/h							
Project = KERGUELEN	Decay Constant 37Ar = 8.230 ± 0.082 E-04 1/h							
Mass Discrimination Law = LIN	Decay Constant 36Cl = 2.236 ± 0.045 E-06 1/a							
Irradiation = OSU2C13	Decay Constant 40K(EC,β <sup>+</sup> ) = 0.580 ± 0.009 E-10 1/a							
J = 0.00157287 ± 0.00001274	Decay Constant 40K(β <sup>-</sup> ) = 4.950 ± 0.043 E-10 1/a							
FCT-3 = 28.201 ± 0.023 Ma	Atmospheric Ratio 40/36(a) = 295.50							
IGSN = Undefined	Atmospheric Ratio 38/36(a) = 0.1869							
Preferred Age = Undefined	Production Ratio 39/37(ca) = 0.000673							
Classification = Undefined	Production Ratio 38/37(ca) = 0.000139							
Experiment Type = Undefined	Production Ratio 36/37(ca) = 0.000264							
Extraction Method = Undefined	Production Ratio 40/39(k) = 0.001010							
Heating = 0 sec	Production Ratio 38/39(k) = 0.011380							
Isolation = 15.00 min	Production Ratio 36/38(cl) = 316.00 ± 15.80							
Instrument = MAP215-50	Scaling Ratio K/Ca = 0.430							
Lithology = Undefined	Abundance Ratio 40K/K = 1.1700 ± 0.0199 E-04							
Lat-Lon = Undefined - Undefined	Atomic Weight K = 39.0983 ± 0.0001 g							
R1 ratio = Undefined	Recalibrated to FCT-3 Secondary Standard							
R2 ratio = Undefined	Standard Age = 28.201 ± 0.023 Ma							
R3 ratio = Undefined								
R4 ratio = Undefined								
R5 ratio = Undefined								
Collector Calibrations =								
						</		



OSU Argon Geochronology Lab																																			
Degassing Patterns			36Ar(a) [V]	%1σ	36Ar(c) [V]	%1σ	36Ar(ca) [V]	%1σ	36Ar(cl) [V]	%1σ	37Ar(ca) [V]	%1σ	38Ar(a) [V]	%1σ	38Ar(c) [V]	%1σ	38Ar(k) [V]	%1σ	38Ar(ca) [V]	%1σ	38Ar(cl) [V]	%1σ	39Ar(k) [V]	%1σ	39Ar(ca) [V]	%1σ	40Ar(r) [V]	%1σ	40Ar(a) [V]	%1σ	40Ar(c) [V]	%1σ	40Ar(k) [V]	%1σ	
	13C2073	500 °C	✓	0.0004826	3.31	0.0000000	0.00	0.0000017	4.38	0.0000001	10.34	0.0065492	4.38	0.0000902	3.31	0.0000000	0.00	0.0001868	0.27	0.0000009	4.38	0.0003116	11.66	0.0164152	0.27	0.0000044	4.38	0.0030265	157.22	0.1426184	3.31	0.0000000	0.00	0.0000166	0.27
	13C2075	600 °C	✓	0.0012170	1.71	0.0000000	0.00	0.0000107	2.26	0.0000004	5.64	0.0404964	2.26	0.0002275	1.71	0.0000000	0.00	0.0011443	0.17	0.0000056	2.26	0.0018764	7.79	0.1005498	0.17	0.0000273	2.26	0.0093776	65.86	0.3596174	1.71	0.0000000	0.00	0.0001016	0.17
	13C2076	700 °C	✓	0.0007276	2.41	0.0000000	0.00	0.0000161	2.21	0.0000005	5.57	0.0610081	2.21	0.0001360	2.41	0.0000000	0.00	0.0016094	0.19	0.0000085	2.21	0.0024609	7.75	0.1414194	0.19	0.0000411	2.21	0.0029311	178.52	0.2150133	2.41	0.0000000	0.00	0.0001428	0.19
	13C2078	800 °C	✓	0.0007436	3.11	0.0000000	0.00	0.0000248	2.19	0.0000007	5.59	0.0940592	2.19	0.0001390	3.11	0.0000000	0.00	0.0024028	0.26	0.0000131	2.19	0.0034157	7.77	0.2111416	0.26	0.0000633	2.19	0.0068076	100.87	0.2197396	3.11	0.0000000	0.00	0.0002133	0.26
	13C2079	900 °C	✓	0.0005299	4.37	0.0000000	0.00	0.0000192	2.22	0.0000005	5.56	0.0728682	2.22	0.0000990	4.37	0.0000000	0.00	0.0017372	0.24	0.0000101	2.22	0.0023789	7.74	0.1526542	0.24	0.0000490	2.22	0.0173640	39.55	0.1565876	4.37	0.0000000	0.00	0.0001542	0.24
	13C2081	1050 °C	✓	0.0006936	2.42	0.0000000	0.00	0.0000240	2.20	0.0000004	5.64	0.0910591	2.20	0.0001296	2.42	0.0000000	0.00	0.0014950	0.24	0.0000127	2.20	0.0020307	7.80	0.1313725	0.24	0.0000613	2.20	0.0083526	59.81	0.2049547	2.42	0.0000000	0.00	0.0001327	0.24
	13C2082	1250 °C	✓	0.0013605	1.86	0.0000000	0.00	0.0000614	2.17	0.0000006	5.57	0.2326784	2.17	0.0002543	1.86	0.0000000	0.00	0.0020976	0.15	0.0000323	2.17	0.0026208	7.75	0.1843204	0.15	0.0001566	2.17	0.0124836	60.14	0.4020364	1.86	0.0000000	0.00	0.0001862	0.15
	13C2084	1400 °C	✓	0.0004252	3.40	0.0000000	0.00	0.0000303	2.19	0.0000002	6.35	0.1148307	2.19	0.0000795	3.40	0.0000000	0.00	0.0008051	0.25	0.0000160	2.19	0.0009863	8.33	0.0707494	0.25	0.0000773	2.19	0.0063803	67.64	0.1256601	3.40	0.0000000	0.00	0.0000715	0.25
		Σ		0.0061801	0.92	0.0000000	0.00	0.0001884	0.94	0.0000034	2.18	0.7135494	0.94	0.0011551	0.92	0.0000000	0.00	0.0114781	0.09	0.0000992	0.94	0.0160815	3.02	1.0086225	0.09	0.0004802	0.94	0.0667234	25.19	1.8262275	0.92	0.0000000	0.00	0.0010187	0.09
		Σ								0.0063719	0.89	0.7135494	0.94									0.0288138	1.69			1.0091027	0.09							1.8939697	1.25



Additional Parameters			40Ar/39Ar	1σ	37Ar/39Ar	1σ	36Ar/39Ar	1σ	Time (days)	37Ar (decay)	39Ar (decay)	40Ar (moles)
13C2073	500 °C	✓	8.871215	0.043001	0.398867	0.017523	0.029503	0.000977	108.882	8.611548	1.00076945	2.913E-14
13C2075	600 °C	✓	3.669789	0.009113	0.402640	0.009126	0.012210	0.000208	108.918	8.617693	1.00076970	7.382E-14
13C2076	700 °C	✓	1.541684	0.005566	0.431273	0.009582	0.005261	0.000124	108.936	8.620767	1.00076983	4.362E-14
13C2078	800 °C	✓	1.073651	0.003970	0.445346	0.009810	0.003642	0.000110	108.972	8.626918	1.00077009	4.535E-14
13C2079	900 °C	✓	1.140158	0.004717	0.477188	0.010649	0.003599	0.000152	108.991	8.630114	1.00077022	3.482E-14
13C2081	1050 °C	✓	1.623936	0.005971	0.692814	0.015329	0.005463	0.000128	109.028	8.636508	1.00077048	4.269E-14
13C2082	1250 °C	✓	2.248010	0.004694	1.261287	0.027463	0.007711	0.000138	109.047	8.639707	1.00077062	8.294E-14
13C2084	1400 °C	✓	1.865284	0.009624	1.621291	0.035729	0.006435	0.000205	109.084	8.645991	1.00077088	2.642E-14



Procedure		36Ar		37Ar		38Ar		39Ar		40Ar	
		[V]	1σ	[V]	1σ	[V]	1σ	[V]	1σ	[V]	1σ
13C2073	500 °C	0.0003267	0.0000133	0.0000247	0.0000175	0.0000256	0.0000203	0.0000984	0.0000278	0.0025993	0.0005813
13C2075	600 °C	0.0003165	0.0000133	0.0000222	0.0000175	0.0000165	0.0000203	0.0000766	0.0000278	0.0027861	0.0005813
13C2076	700 °C	0.0003135	0.0000133	0.0000217	0.0000175	0.0000132	0.0000203	0.0000734	0.0000278	0.0028656	0.0005813
13C2078	800 °C	0.0003120	0.0000133	0.0000223	0.0000175	0.0000091	0.0000203	0.0000812	0.0000278	0.0024579	0.0005813
13C2079	900 °C	0.0003135	0.0000133	0.0000235	0.0000175	0.0000084	0.0000203	0.0000905	0.0000278	0.0019318	0.0005813
13C2081	1050 °C	0.0003212	0.0000133	0.0000276	0.0000175	0.0000096	0.0000203	0.0001099	0.0000278	0.0007509	0.0005813
13C2082	1250 °C	0.0003274	0.0000133	0.0000305	0.0000175	0.0000115	0.0000203	0.0001144	0.0000278	0.0005340	0.0005813
13C2084	1400 °C	0.0003440	0.0000133	0.0000379	0.0000175	0.0000180	0.0000203	0.0000960	0.0000278	0.0024382	0.0005813



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Intercept Values		36Ar [V]	1σ	r2		37Ar [V]	1σ	r2		38Ar [V]	1σ	r2		39Ar [V]	1σ	r2		40Ar [V]	1σ	r2
13C2073	500 °C	0.0008259	0.0000096	0.6324	LIN # 8	0.0008024	0.0000240	0.4275	LIN # 4	0.0006243	0.0000189	0.3071	LIN #	0.0166461	0.0000348	0.9780	EXP #	0.1484984	0.0000685	0.7718
13C2075	600 °C	0.0015814	0.0000166	0.6617	LIN #	0.0048277	0.0000275	0.9679	EXP #	0.0033212	0.0000237	0.9554	LIN #	0.1014478	0.0001691	0.9976	EXP # 5	0.3725160	0.0003177	0.9959
13C2076	700 °C	0.0010804	0.0000121	0.6477	LIN #	0.0072587	0.0000319	0.9848	EXP #	0.0042940	0.0000287	0.9594	LIN #	0.1426509	0.0002609	0.9973	EXP # 7	0.2213292	0.0003422	0.3169
13C2078	800 °C	0.0011044	0.0000197	0.2985	LIN #	0.0111708	0.0000366	0.9921	EXP #	0.0060726	0.0000477	0.9559	LIN #	0.2129324	0.0005512	0.9948	EXP #	0.2295857	0.0001218	0.6940
13C2079	900 °C	0.0008800	0.0000197	0.0006	LIN #	0.0086580	0.0000413	0.9836	EXP # 2	0.0042999	0.0000251	0.9762	LIN #	0.1539994	0.0003639	0.9962	EXP # 2	0.1763373	0.0000882	0.9763
13C2081	1050 °C	0.0010610	0.0000109	0.5331	LIN #	0.0108085	0.0000426	0.9885	EXP #	0.0037347	0.0000277	0.9593	LIN #	0.1325682	0.0003107	0.9960	EXP # 1	0.2145343	0.0001460	0.9863
13C2082	1250 °C	0.0017925	0.0000223	0.7533	LIN #	0.0275710	0.0000651	0.9959	EXP #	0.0050949	0.0000313	0.9734	LIN # 1 9	0.1860480	0.0002772	0.9981	EXP #	0.4159472	0.0001022	0.9995
13C2084	1400 °C	0.0008140	0.0000065	0.8831	LIN # 10	0.0136211	0.0000460	0.9902	EXP #	0.0019347	0.0000266	0.8435	LIN #	0.0714892	0.0001777	0.9941	EXP #	0.1347926	0.0001204	0.4452



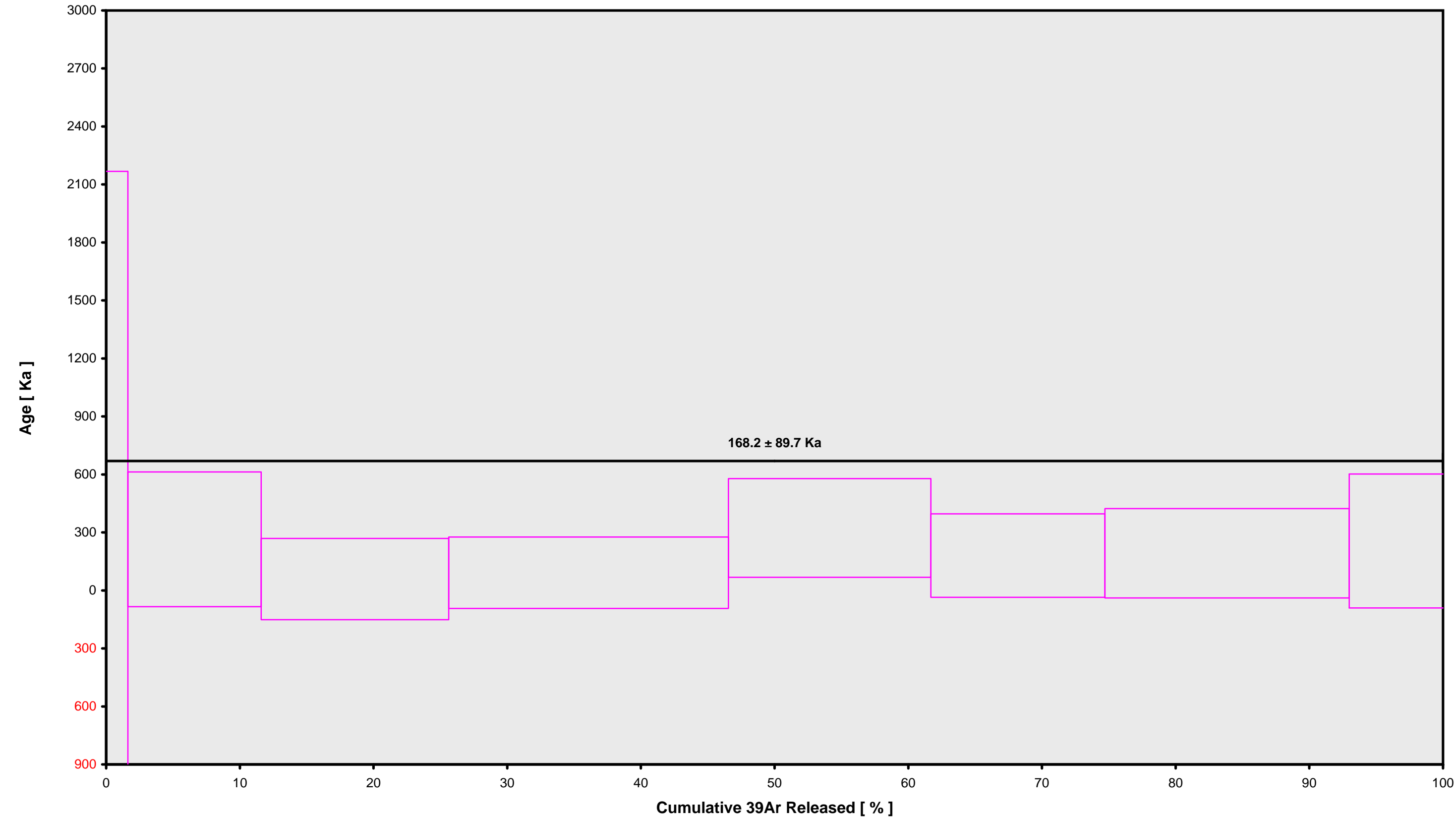
OSU Argon Geochronology Lab																																		
Sample Parameters			Sample	Material	Location	Analyst	Temp	Standard Name	Standard (in Ma)	%1σ	Standard Reference	Standard 40Ar/39Ar	%1σ	J	%1σ	Air 40Ar/36Ar	%1σ	MDF	%1σ	Volume Ratio	Sensitivity (mol/volt)	Day	Month	Year	Hour	Min	Resist	Irradiation	X-pos	Y-pos	Z/H-pos	Project	Experiment	Nmb
	13C2073	500 °C	274-2	Groundmass	Kerguelen Plateau	Trevor Smith	500	FCT-3	28.201	0.083	Kuiper et al., 2008			0.00157287	0.810			1.00697	0.030	0.9984	2E-13	23	JUL	2013	13	11	1	OSU2C13	0.00	0.00	41.10	Kerguelen	13C2073	01
	13C2075	600 °C	274-2	Groundmass	Kerguelen Plateau	Trevor Smith	600	FCT-3	28.03	0.01	Kuiper et al., 2008			0.00157287	0.810			1.00697	0.030	0.9983	2E-13	23	JUL	2013	14	3	1	OSU2C13	0.00	0.00	41.10	Kerguelen	13C2073	01
	13C2076	700 °C	274-2	Groundmass	Kerguelen Plateau	Trevor Smith	700	FCT-3	28.03	0.01	Kuiper et al., 2008			0.00157287	0.810			1.00697	0.030	0.9983	2E-13	23	JUL	2013	14	29	1	OSU2C13	0.00	0.00	41.10	Kerguelen	13C2073	01
	13C2078	800 °C	274-2	Groundmass	Kerguelen Plateau	Trevor Smith	800	FCT-3	28.03	0.01	Kuiper et al., 2008			0.00157287	0.810			1.00697	0.030	0.9984	2E-13	23	JUL	2013	15	21	1	OSU2C13	0.00	0.00	41.10	Kerguelen	13C2073	01
	13C2079	900 °C	274-2	Groundmass	Kerguelen Plateau	Trevor Smith	900	FCT-3	28.03	0.01	Kuiper et al., 2008			0.00157287	0.810			1.00697	0.030	0.9983	2E-13	23	JUL	2013	15	48	1	OSU2C13	0.00	0.00	41.10	Kerguelen	13C2073	01
	13C2081	1050 °C	274-2	Groundmass	Kerguelen Plateau	Trevor Smith	1050	FCT-3	28.03	0.01	Kuiper et al., 2008			0.00157287	0.810			1.00697	0.030	0.9984	2E-13	23	JUL	2013	16	42	1	OSU2C13	0.00	0.00	41.10	Kerguelen	13C2073	01
	13C2082	1250 °C	274-2	Groundmass	Kerguelen Plateau	Trevor Smith	1250	FCT-3	28.03	0.01	Kuiper et al., 2008			0.00157287	0.810			1.00697	0.030	0.9983	2E-13	23	JUL	2013	17	9	1	OSU2C13	0.00	0.00	41.10	Kerguelen	13C2073	01
	13C2084	1400 °C	274-2	Groundmass	Kerguelen Plateau	Trevor Smith	1400	FCT-3	28.03	0.01	Kuiper et al., 2008			0.00157287	0.810			1.00697	0.030	0.9982	2E-13	23	JUL	2013	18	2	1	OSU2C13	0.00	0.00	41.10	Kerguelen	13C2073	01



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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
	13C2073	500 °C	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0
	13C2075	600 °C	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0
	13C2076	700 °C	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0
	13C2078	800 °C	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0
	13C2079	900 °C	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0
	13C2081	1050 °C	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0
	13C2082	1250 °C	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0
	13C2084	1400 °C	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0



13C2073.AGE >>> 274-2 >>> KERGUELEN PROJECT



Ar-Ages in Ka

WEIGHTED PLATEAU

168.2 ± 89.7

TOTAL FUSION

187.7 ± 94.6

NORMAL ISOCHRON

80.7 ± 216.7

INVERSE ISOCHRON

93.9 ± 90.4

MSWD (PROBABILITY)

0.58 (77%)

Sample Info

Groundmass

Kerguelen Plateau

Trevor Smith

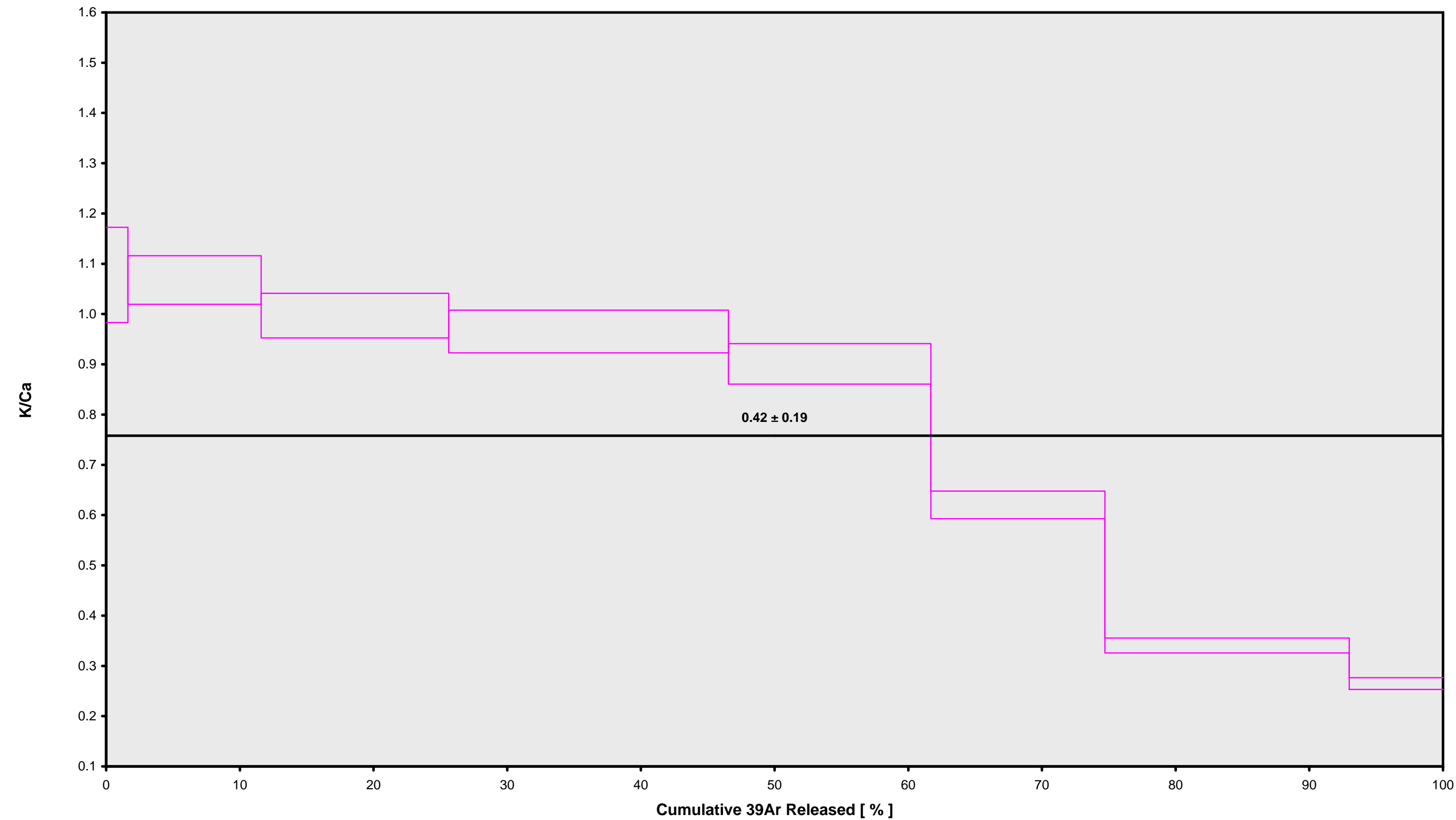
IRR = OSU2C13

J = 0.00157287 ± 0.00001274

RECALIBRATED AGE



13C2073.AGE >>> 274-2 >>> KERGUELEN PROJECT



**Ar-Ages in Ka**

**WEIGHTED PLATEAU**

**168.2 ± 89.7**

**TOTAL FUSION**

**187.7 ± 94.6**

**NORMAL ISOCHRON**

**80.7 ± 216.7**

**INVERSE ISOCHRON**

**93.9 ± 90.4**

**Sample Info**

**Groundmass**

**Kerguelen Plateau**

**Trevor Smith**

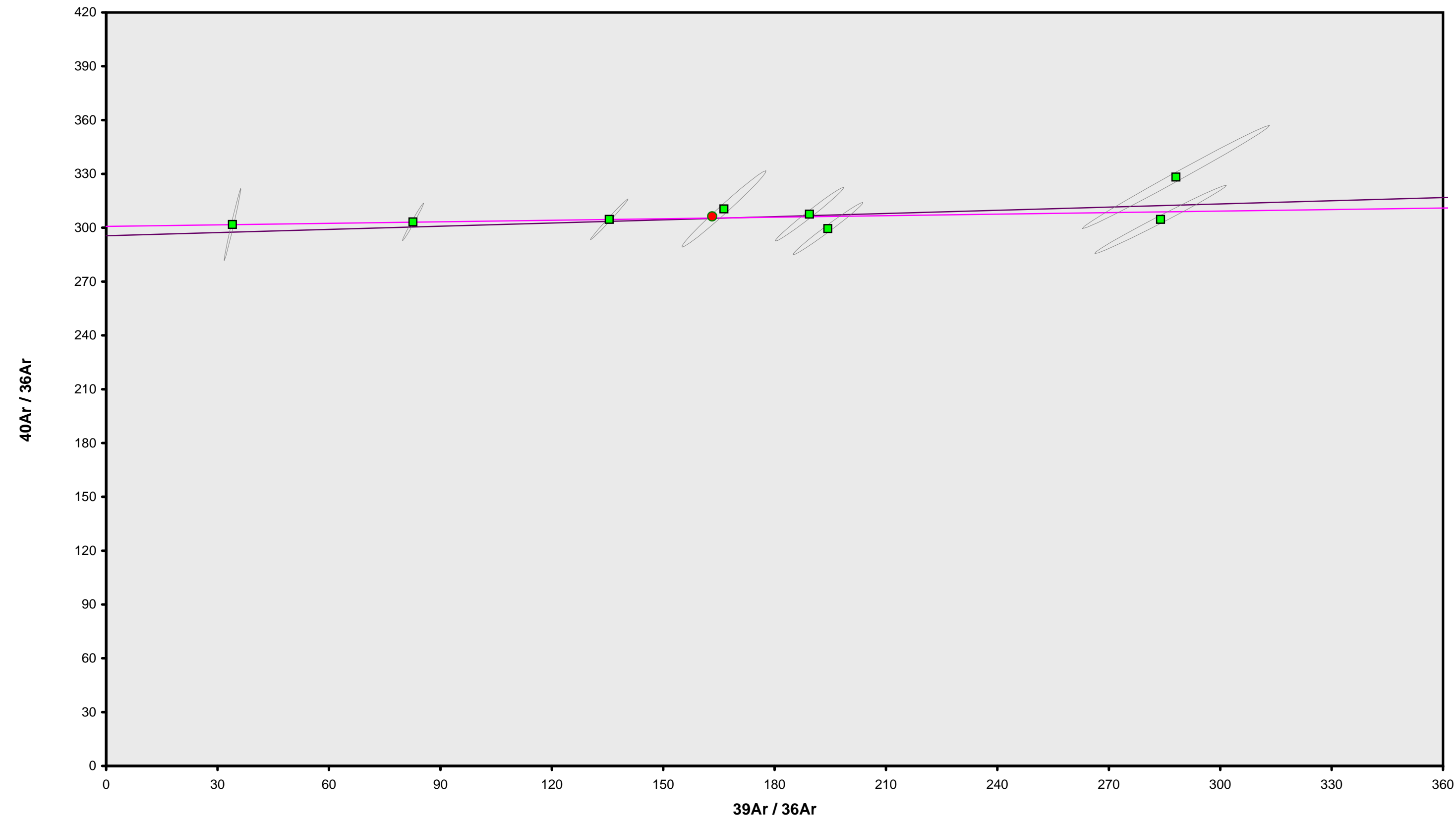
**IRR = OSU2C13**

**J = 0.00157287 ± 0.00001274**

**RECALIBRATED AGE**



13C2073.AGE >>> 274-2 >>> KERGUELEN PROJECT



Ar-Ages in Ka

WEIGHTED PLATEAU

168.2  $\pm$  89.7

TOTAL FUSION

187.7  $\pm$  94.6

NORMAL ISOCHRON

80.7  $\pm$  216.7

INVERSE ISOCHRON

93.9  $\pm$  90.4

MSWD (PROBABILITY)

0.54 (78%)

40AR/36AR INTERCEPT

300.7  $\pm$  12.6

Sample Info

Groundmass

Kerguelen Plateau

Trevor Smith

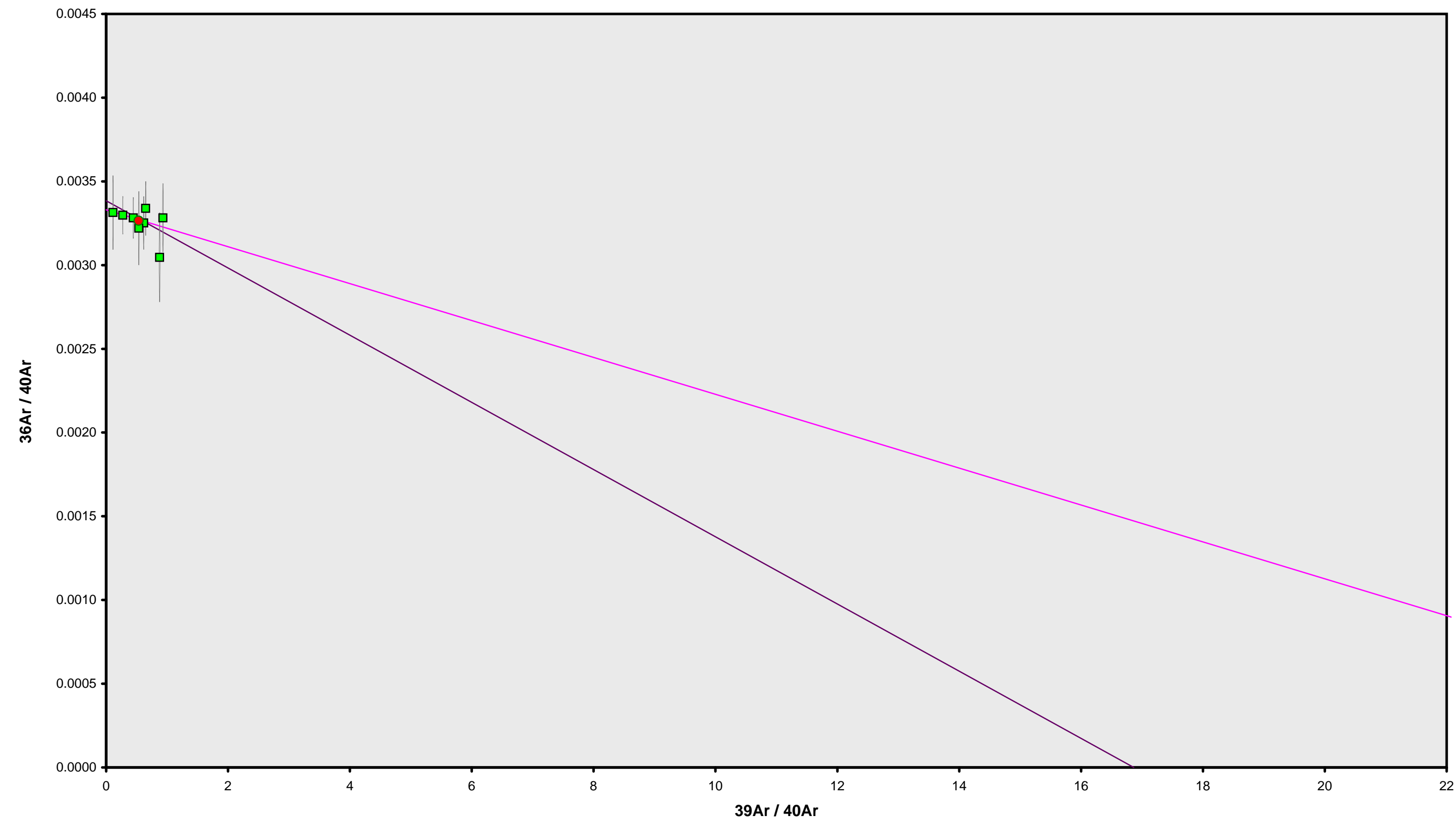
IRR = OSU2C13

J = 0.00157287  $\pm$  0.00001274

RECALIBRATED AGE



13C2073.AGE >>> 274-2 >>> KERGUELEN PROJECT



Ar-Ages in Ka

WEIGHTED PLATEAU

168.2 ± 89.7

TOTAL FUSION

187.7 ± 94.6

NORMAL ISOCHRON

80.7 ± 216.7

INVERSE ISOCHRON

93.9 ± 90.4

MSWD (PROBABILITY)

0.57 (75%)

SPREADING FACTOR

2.7%

40AR/36AR INTERCEPT

300.3 ± 12.5

Sample Info

Groundmass

Kerguelen Plateau

Trevor Smith

IRR = OSU2C13

J = 0.00157287 ± 0.00001274

RECALIBRATED AGE



Incremental Heating			36Ar(a) [V]	37Ar(ca) [V]	38Ar(cl) [V]	39Ar(k) [V]	40Ar(r) [V]	Age ± 2σ (Ma)	40Ar(r) (%)	39Ar(k) (%)	K/Ca ± 2σ
13C2060	500 °C	✓	0.0028076	0.0061403	0.0003588	0.0133748	0.0033556	0.72 ± 2.89	0.40	1.88	0.937 ± 0.084
13C2062	600 °C	✓	0.0063520	0.0166410	0.0014383	0.0513907	0.0160337	0.89 ± 0.81	0.85	7.23	1.328 ± 0.068
13C2063	700 °C	✓	0.0033535	0.0191032	0.0016253	0.0661849	0.0178797	0.77 ± 0.78	1.77	9.31	1.490 ± 0.069
13C2065	800 °C	✓	0.0048897	0.0306454	0.0021315	0.0945808	0.0406790	1.23 ± 0.39	2.74	13.30	1.327 ± 0.063
13C2066	900 °C	✓	0.0092645	0.0418128	0.0020257	0.0979247	0.0528153	1.54 ± 0.37	1.89	13.77	1.007 ± 0.044
13C2068	1050 °C	✓	0.0205106	0.1498284	0.0037100	0.1682040	0.0913321	1.55 ± 0.48	1.48	23.66	0.483 ± 0.021
13C2069	1250 °C	✓	0.0208344	0.4017691	0.0040072	0.1844549	0.1072763	1.67 ± 0.26	1.71	25.94	0.197 ± 0.009
13C2071	1400 °C	✓	0.0034317	0.1117377	0.0007176	0.0348912	0.0146788	1.20 ± 1.00	1.43	4.91	0.134 ± 0.006
Σ			0.0714440	0.7776780	0.0160144	0.7110060	0.3440505				

Information on Analysis	Results	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD	39Ar(k) (% ,n)	K/Ca ± 2σ
Sample = 253-12	Age Plateau	0.51090 ± 0.06794	1.46 ± 0.19	1.40	100.00	0.200 ± 0.142
Material = Groundmass	Recalibrated	± 13.30%	± 13.30%	20%	8	
Location = Kerguelen Plateau			Full External Error ± 0.20	2.07	2σ Confidence Limit	
Analyst = Kyle Krawl			Analytical Error ± 0.19	1.1826	Error Magnification	
Project = KERGUELEN						
Mass Discrimination Law = LIN	Total Fusion Age	0.48389 ± 0.06716	1.39 ± 0.19		8	0.393 ± 0.010
Irradiation = OSU2C13	Recalibrated	± 13.88%	± 13.88%			
J = 0.00158793 ± 0.00000405			Full External Error ± 0.19			
FCT-3 = 28.201 ± 0.023 Ma			Analytical Error ± 0.19			



Normal Isochron			39(k)/36(a) ± 2σ	40(a+r)/36(a) ± 2σ	r.i.
13C2060	500 °C	✓	4.76 ± 0.08	296.70 ± 4.83	0.9007
13C2062	600 °C	✓	8.09 ± 0.06	298.02 ± 2.30	0.8863
13C2063	700 °C	✓	19.74 ± 0.36	300.83 ± 5.46	0.9716
13C2065	800 °C	✓	19.34 ± 0.16	303.82 ± 2.68	0.9256
13C2066	900 °C	✓	10.57 ± 0.05	301.20 ± 1.39	0.7522
13C2068	1050 °C	✓	8.20 ± 0.04	299.95 ± 1.40	0.9343
13C2069	1250 °C	✓	8.85 ± 0.03	300.65 ± 0.82	0.5867
13C2071	1400 °C	✓	10.17 ± 0.12	299.78 ± 3.59	0.9157

Results	40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD
Normal Isochron Recalibrated	297.44 ± 2.28 ± 0.77%	0.32237 ± 0.22879 ± 70.97%	0.92 ± 0.66 ± 70.95%	1.10 36%
Full External Error ± 0.66 Analytical Error ± 0.66				
Statistics	2σ Confidence Limit Error Magnification Number of Data Points	2.15 1.0510 8	Convergence Number of Iterations Calculated Line	0.000000000112 5 Weighted York-2



Inverse Isochron			39(k)/40(a+r) ± 2σ	36(a)/40(a+r) ± 2σ	r.i.
13C2060	500 °C	✓	0.0160560 ± 0.0001208	0.00337046 ± 0.00005490	0.1024
13C2062	600 °C	✓	0.0271472 ± 0.0000984	0.00335543 ± 0.00002587	0.3055
13C2063	700 °C	✓	0.0656049 ± 0.0002844	0.00332412 ± 0.00006030	0.1002
13C2065	800 °C	✓	0.0636659 ± 0.0002138	0.00329143 ± 0.00002906	0.2830
13C2066	900 °C	✓	0.0350925 ± 0.0001166	0.00332004 ± 0.00001531	0.2980
13C2068	1050 °C	✓	0.0273403 ± 0.0000469	0.00333386 ± 0.00001559	0.1255
13C2069	1250 °C	✓	0.0294475 ± 0.0000824	0.00332614 ± 0.00000912	0.2856
13C2071	1400 °C	✓	0.0339167 ± 0.0001690	0.00333581 ± 0.00003991	0.1478

Results	40(a)/36(a) ± 2σ		40(r)/39(k) ± 2σ		Age ± 2σ (Ma)	MSWD
Inverse Isochron	297.44 ± 2.27		0.32282 ± 0.17168		0.92 ± 0.49	1.09
Clustered Points	± 0.76%		± 53.18%		± 53.17%	36%
				Full External Error ± 0.49		
				Analytical Error ± 0.49		
Statistics	2σ Confidence Limit	2.15	Convergence		0.0000029243	
	Error Magnification	1.0446	Number of Iterations		4	
	Number of Data Points	8	Calculated Line		Weighted York-2	
	Spreading Factor	1.6%				



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Relative Abundances			40Ar		39Ar		38Ar		37Ar		36Ar		40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	40Ar(r) (%)	39Ar(k) (%)	K/Ca ± 2σ
			[V]	1σ	[V]	1σ	[V]	1σ	[V]	1σ	[V]	1σ					
13C2060	500 °C	✓	0.833023	0.0014752	0.0133789	0.0000444	0.0010366	0.0000315	0.0061403	0.0002743	0.0028093	0.0000223	0.25089 ± 1.01055	0.72 ± 2.89	0.40	1.88	0.937 ± 0.084
13C2062	600 °C	✓	1.893089	0.0027653	0.0514019	0.0000551	0.0032126	0.0000260	0.0166410	0.0004282	0.0063567	0.0000227	0.31200 ± 0.28197	0.89 ± 0.81	0.85	7.23	1.328 ± 0.068
13C2063	700 °C	✓	1.008907	0.0014161	0.0661977	0.0001093	0.0030079	0.0000406	0.0191032	0.0004444	0.0033589	0.0000301	0.27015 ± 0.27174	0.77 ± 0.78	1.77	9.31	1.490 ± 0.069
13C2065	800 °C	✓	1.485677	0.0021515	0.0946015	0.0000803	0.0041259	0.0000274	0.0306454	0.0007296	0.0048982	0.0000204	0.43010 ± 0.13527	1.23 ± 0.39	2.74	13.30	1.327 ± 0.063
13C2066	900 °C	✓	2.790572	0.0029811	0.0979528	0.0001246	0.0048774	0.0000293	0.0418128	0.0009211	0.0092760	0.0000189	0.53935 ± 0.12945	1.54 ± 0.37	1.89	13.77	1.007 ± 0.044
13C2068	1050 °C	✓	6.152397	0.0030860	0.1683049	0.0001170	0.0094784	0.0000228	0.1498284	0.0032390	0.0205510	0.0000468	0.54298 ± 0.16857	1.55 ± 0.48	1.48	23.66	0.483 ± 0.021
13C2069	1250 °C	✓	6.264038	0.0046363	0.1847253	0.0002189	0.0100561	0.0000299	0.4017691	0.0087093	0.0209413	0.0000239	0.58159 ± 0.09201	1.67 ± 0.26	1.71	25.94	0.197 ± 0.009
13C2071	1400 °C	✓	1.028768	0.0015268	0.0349664	0.0000698	0.0017716	0.0000312	0.1117377	0.0024175	0.0034613	0.0000199	0.42070 ± 0.34807	1.20 ± 1.00	1.43	4.91	0.134 ± 0.006

Σ			21.456471	0.0076612	0.7115294	0.0003247	0.0375666	0.0000855	0.7776780	0.0096966	0.0716527	0.0000765				
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Information on Analysis and Constants Used in Calculations		Results						
		40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD	39Ar(k) (%.n)	K/Ca ± 2σ	
Sample = 253-12	Age Equations = Min et al. (2000)							
Material = Groundmass	Negative Intensities = Allowed							
Location = Kerguelen Plateau	Decay Constant 40K = 5.543 ± 0.044 E-10 1/a							
Analyst = Kyle Krawl	Decay Constant 39Ar = 2.940 ± 0.029 E-07 1/h							
Project = KERGUELEN	Decay Constant 37Ar = 8.230 ± 0.082 E-04 1/h							
Mass Discrimination Law = LIN	Decay Constant 36Cl = 2.236 ± 0.045 E-06 1/a							
Irradiation = OSU2C13	Decay Constant 40K(EC,β <sup>+</sup> ) = 0.580 ± 0.009 E-10 1/a							
J = 0.00158793 ± 0.00000405	Decay Constant 40K(β <sup>-</sup> ) = 4.950 ± 0.043 E-10 1/a							
FCT-3 = 28.201 ± 0.023 Ma	Atmospheric Ratio 40/36(a) = 295.50							
IGSN = Undefined	Atmospheric Ratio 38/36(a) = 0.1869							
Preferred Age = Undefined	Production Ratio 39/37(ca) = 0.000673							
Classification = Undefined	Production Ratio 38/37(ca) = 0.000139							
Experiment Type = Undefined	Production Ratio 36/37(ca) = 0.000264							
Extraction Method = Undefined	Production Ratio 40/39(k) = 0.001010							
Heating = 0 sec	Production Ratio 38/39(k) = 0.011380							
Isolation = 15.00 min	Production Ratio 36/38(cl) = 316.00 ± 15.80							
Instrument = MAP215-50	Scaling Ratio K/Ca = 0.430							
Lithology = Undefined	Abundance Ratio 40K/K = 1.1700 ± 0.0199 E-04							
Lat-Lon = Undefined - Undefined	Atomic Weight K = 39.0983 ± 0.0001 g							
R1 ratio = Undefined	Recalibrated to FCT-3 Secondary Standard							
R2 ratio = Undefined	Standard Age = 28.201 ± 0.023 Ma							
R3 ratio = Undefined								
R4 ratio = Undefined								
R5 ratio = Undefined								
Collector Calibrations =								



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Degassing Patterns			36Ar(a) [V]	%1σ	36Ar(c) [V]	%1σ	36Ar(ca) [V]	%1σ	36Ar(cl) [V]	%1σ	37Ar(ca) [V]	%1σ	38Ar(a) [V]	%1σ	38Ar(c) [V]	%1σ	38Ar(k) [V]	%1σ	38Ar(ca) [V]	%1σ	38Ar(cl) [V]	%1σ	39Ar(k) [V]	%1σ	39Ar(ca) [V]	%1σ	40Ar(r) [V]	%1σ	40Ar(a) [V]	%1σ	40Ar(c) [V]	%1σ	40Ar(k) [V]	%1σ	
	13C2060	500 °C	✓	0.0028076	0.79	0.0000000	0.00	0.0000016	4.47	0.0000001	10.36	0.0061403	4.47	0.0005247	0.79	0.0000000	0.00	0.0001522	0.33	0.0000009	4.47	0.0003588	11.68	0.0133748	0.33	0.0000041	4.47	0.0033556	201.39	0.829654	0.79	0.0000000	0.00	0.0000135	0.33
	13C2062	600 °C	✓	0.0063520	0.36	0.0000000	0.00	0.0000044	2.57	0.0000003	5.69	0.0166410	2.57	0.0011872	0.36	0.0000000	0.00	0.0005848	0.11	0.0000023	2.57	0.0014383	7.83	0.0513907	0.11	0.0000112	2.57	0.0160337	45.19	1.877003	0.36	0.0000000	0.00	0.0000519	0.11
	13C2063	700 °C	✓	0.0033535	0.90	0.0000000	0.00	0.0000050	2.33	0.0000003	5.95	0.0191032	2.33	0.0006268	0.90	0.0000000	0.00	0.0007532	0.17	0.0000027	2.33	0.0016253	8.02	0.0661849	0.17	0.0000129	2.33	0.0178797	50.29	0.990960	0.90	0.0000000	0.00	0.0000668	0.17
	13C2065	800 °C	✓	0.0048897	0.42	0.0000000	0.00	0.0000081	2.38	0.0000004	5.54	0.0306454	2.38	0.0009139	0.42	0.0000000	0.00	0.0010763	0.08	0.0000043	2.38	0.0021315	7.73	0.0945808	0.08	0.0000206	2.38	0.0406790	15.73	1.444903	0.42	0.0000000	0.00	0.0000955	0.08
	13C2066	900 °C	✓	0.0092645	0.20	0.0000000	0.00	0.0000110	2.20	0.0000004	5.58	0.0418128	2.20	0.0017315	0.20	0.0000000	0.00	0.0011144	0.13	0.0000058	2.20	0.0020257	7.75	0.0979247	0.13	0.0000281	2.20	0.0528153	12.00	2.737658	0.20	0.0000000	0.00	0.0000989	0.13
	13C2068	1050 °C	✓	0.0205106	0.23	0.0000000	0.00	0.0000396	2.16	0.0000008	5.43	0.1498284	2.16	0.0038334	0.23	0.0000000	0.00	0.0019142	0.07	0.0000208	2.16	0.0037100	7.64	0.1682040	0.07	0.0001008	2.16	0.0913321	15.52	6.060895	0.23	0.0000000	0.00	0.0001699	0.07
	13C2069	1250 °C	✓	0.0208344	0.12	0.0000000	0.00	0.0001061	2.17	0.0000008	5.44	0.4017691	2.17	0.0038940	0.12	0.0000000	0.00	0.0020991	0.12	0.0000558	2.17	0.0040072	7.65	0.1844549	0.12	0.0002704	2.17	0.1072763	7.91	6.156575	0.12	0.0000000	0.00	0.0001863	0.12
	13C2071	1400 °C	✓	0.0034317	0.58	0.0000000	0.00	0.0000295	2.16	0.0000002	6.94	0.1117377	2.16	0.0006414	0.58	0.0000000	0.00	0.0003971	0.20	0.0000155	2.16	0.0007176	8.78	0.0348912	0.20	0.0000752	2.16	0.0146788	41.37	1.014054	0.58	0.0000000	0.00	0.0000352	0.20
		Σ		0.0714440	0.11	0.0000000	0.00	0.0002053	1.25	0.0000034	2.29	0.7776780	1.25	0.0133529	0.11	0.0000000	0.00	0.0080912	0.05	0.0001081	1.25	0.0160144	3.19	0.7110060	0.05	0.0005234	1.25	0.3440505	6.94	21.111703	0.11	0.0000000	0.00	0.0007181	0.05
		Σ									0.0716527	0.11	0.7776780	1.25								0.0375666	1.36				0.7115294	0.05							21.456471



Additional Parameters			40Ar/39Ar	1σ	37Ar/39Ar	1σ	36Ar/39Ar	1σ	Time (days)	37Ar (decay)	39Ar (decay)	40Ar (moles)
13C2060	500 °C	✓	62.263932	0.234176	0.458954	0.020559	0.209982	0.001808	108.649	8.572068	1.00076781	1.666E-13
13C2062	600 °C	✓	36.829171	0.066720	0.323744	0.008337	0.123666	0.000460	108.685	8.578067	1.00076806	3.786E-13
13C2063	700 °C	✓	15.240812	0.033028	0.288578	0.006730	0.050740	0.000462	108.703	8.581127	1.00076818	2.018E-13
13C2065	800 °C	✓	15.704591	0.026365	0.323942	0.007717	0.051777	0.000220	108.738	8.587014	1.00076843	2.971E-13
13C2066	900 °C	✓	28.488943	0.047321	0.426867	0.009420	0.094698	0.000228	108.755	8.589959	1.00076855	5.581E-13
13C2068	1050 °C	✓	36.555075	0.031342	0.890220	0.019255	0.122106	0.000291	108.790	8.595853	1.00076880	1.230E-12
13C2069	1250 °C	✓	33.910019	0.047386	2.174955	0.047218	0.113365	0.000187	108.808	8.599037	1.00076893	1.253E-12
13C2071	1400 °C	✓	29.421578	0.073201	3.195569	0.069430	0.098989	0.000602	108.845	8.605290	1.00076919	2.058E-13



Procedure Blanks		36Ar [V]	1σ	37Ar [V]	1σ	38Ar [V]	1σ	39Ar [V]	1σ	40Ar [V]	1σ
13C2060	500 °C	0.0002860	0.0000133	0.0000157	0.0000162	0.0000118	0.0000184	0.0000338	0.0000277	0.0019285	0.0012708
13C2062	600 °C	0.0003118	0.0000133	0.0000246	0.0000162	0.0000217	0.0000184	0.0000423	0.0000277	0.0038832	0.0012708
13C2063	700 °C	0.0003221	0.0000133	0.0000280	0.0000162	0.0000256	0.0000184	0.0000583	0.0000277	0.0046352	0.0012708
13C2065	800 °C	0.0003366	0.0000133	0.0000320	0.0000162	0.0000310	0.0000184	0.0000987	0.0000277	0.0056173	0.0012708
13C2066	900 °C	0.0003412	0.0000133	0.0000329	0.0000162	0.0000327	0.0000184	0.0001192	0.0000277	0.0058793	0.0012708
13C2068	1050 °C	0.0003450	0.0000133	0.0000322	0.0000162	0.0000339	0.0000184	0.0001515	0.0000277	0.0059453	0.0012708
13C2069	1250 °C	0.0003442	0.0000133	0.0000306	0.0000162	0.0000334	0.0000184	0.0001605	0.0000277	0.0057271	0.0012708
13C2071	1400 °C	0.0003365	0.0000133	0.0000248	0.0000162	0.0000301	0.0000184	0.0001533	0.0000277	0.0047808	0.0012708



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Intercept Values		36Ar [V]	1σ	r2		37Ar [V]	1σ	r2		38Ar [V]	1σ	r2		39Ar [V]	1σ	r2		40Ar [V]	1σ	r2	
	13C2060	500 °C	0.0032034	0.0000190	0.9508	LIN #	0.0007529	0.0000239	0.1385	EXP #	0.0010691	0.0000263	0.2983	LIN #	0.0135455	0.0000352	0.9887	EXP #	0.8362061	0.0007503	0.9983
	13C2062	600 °C	0.0069138	0.0000194	0.9926	LIN # 1 8	0.0020215	0.0000231	0.2278	LIN # 4 8	0.0032990	0.0000191	0.9283	LIN #	0.0519647	0.0000482	0.9233	LIN # 4 6	1.9002027	0.0024601	0.9983
	13C2063	700 °C	0.0038105	0.0000282	0.9530	LIN # 2 5 8	0.0023192	0.0000123	0.8658	EXP # 3 9	0.0030938	0.0000372	0.8402	LIN #	0.0669197	0.0001068	0.9943	EXP # 6	1.0151664	0.0006259	0.9992
	13C2065	800 °C	0.0054230	0.0000165	0.9880	LIN # 5	0.0037047	0.0000339	0.8136	LIN # 6 7	0.0042392	0.0000210	0.9646	LIN #	0.0956390	0.0000762	0.9988	EXP # 6 8	1.4935346	0.0017387	0.9979
	13C2066	900 °C	0.0099750	0.0000145	0.9969	LIN #	0.0050432	0.0000176	0.3291	EXP #	0.0050083	0.0000236	0.9417	LIN #	0.0990640	0.0001227	0.9658	LIN # 1	2.8012138	0.0027012	0.9990
	13C2068	1050 °C	0.0216882	0.0000468	0.9919	LIN #	0.0179735	0.0000346	0.9857	EXP # 7	0.0097032	0.0000143	0.9891	LIN #	0.1701606	0.0001149	0.9537	EXP # 1 4 11	6.1688291	0.0028169	0.9993
	13C2069	1250 °C	0.0220927	0.0000210	0.9986	EXP #	0.0481226	0.0001258	0.9933	EXP # 4	0.0102920	0.0000243	0.9753	LIN #	0.1867563	0.0002194	0.0276	LIN # 2 3 4 6	6.2804417	0.0044664	0.9982
	13C2071	1400 °C	0.0039313	0.0000158	0.9688	LIN #	0.0133888	0.0000244	0.9967	EXP #	0.0018372	0.0000259	0.5381	LIN #	0.0354704	0.0000648	0.0022	EXP #	1.0352050	0.0008476	0.9986



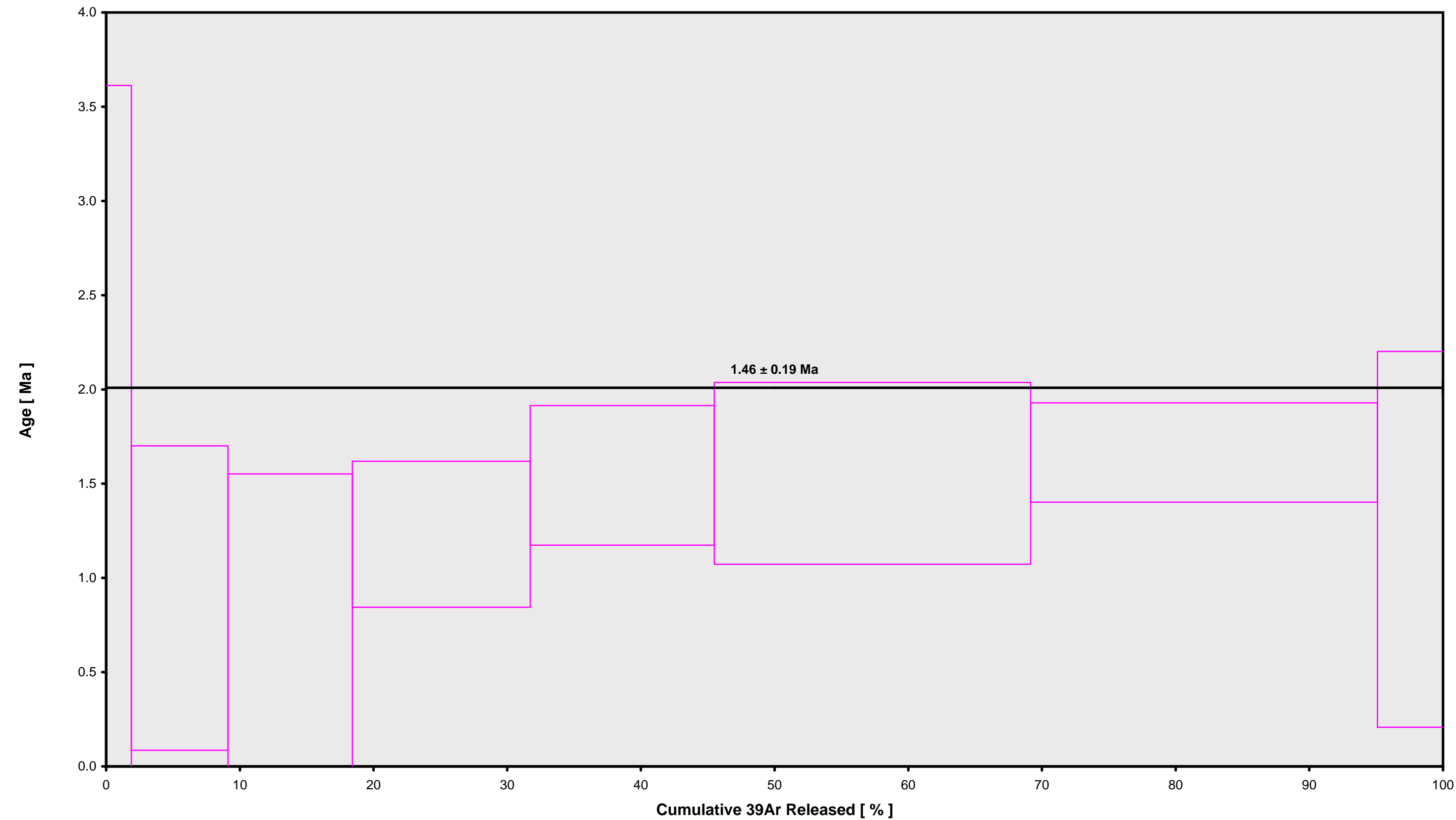
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Sample Parameters		Sample	Material	Location	Analyst	Temp	Standard Name	Standard (in Ma)	%1σ	Standard Reference	Standard 40Ar/39Ar	%1σ	J	%1σ	Air 40Ar/36Ar	%1σ	MDF	%1σ	Volume Ratio	Sensitivity (mol/volt)	Day	Month	Year	Hour	Min	Resist	Irradiation	X-pos	Y-pos	Z/H-pos	Project	Experiment	Nmb		
		13C2060	500 °C	253-12	Groundmass	Kerguelen Plateau	Kyle Krawl	500	FCT-3	28.201	0.083	Kuiper et al., 2008			0.00158793	0.255			1.0092	0.001	0.9985	2E-13	23	JUL	2013	7	36	1	OSU2C13	0.00	0.00	37.70	Kerguelen	13C2060	01
		13C2062	600 °C	253-12	Groundmass	Kerguelen Plateau	Trevor Smith	600	FCT-3	28.201	0.083	Kuiper et al., 2008			0.00158793	0.255			1.0092	0.001	0.9983	2E-13	23	JUL	2013	8	27	1	OSU2C13	0.00	0.00	37.70	Kerguelen	13C2060	01
		13C2063	700 °C	253-12	Groundmass	Kerguelen Plateau	Trevor Smith	700	FCT-3	28.201	0.083	Kuiper et al., 2008			0.00158793	0.255			1.0092	0.001	0.9984	2E-13	23	JUL	2013	8	53	1	OSU2C13	0.00	0.00	37.70	Kerguelen	13C2060	01
		13C2065	800 °C	253-12	Groundmass	Kerguelen Plateau	Trevor Smith	800	FCT-3	28.201	0.083	Kuiper et al., 2008			0.00158793	0.255			1.0092	0.001	0.9985	2E-13	23	JUL	2013	9	43	1	OSU2C13	0.00	0.00	37.70	Kerguelen	13C2060	01
		13C2066	900 °C	253-12	Groundmass	Kerguelen Plateau	Trevor Smith	900	FCT-3	28.201	0.083	Kuiper et al., 2008			0.00158793	0.255			1.0092	0.001	0.9983	2E-13	23	JUL	2013	10	8	1	OSU2C13	0.00	0.00	37.70	Kerguelen	13C2060	01
		13C2068	1050 °C	253-12	Groundmass	Kerguelen Plateau	Kyle Krawl	1050	FCT-3	28.201	0.083	Kuiper et al., 2008			0.00158793	0.255			1.0092	0.001	0.9983	2E-13	23	JUL	2013	10	58	1	OSU2C13	0.00	0.00	37.70	Kerguelen	13C2060	01
		13C2069	1250 °C	253-12	Groundmass	Kerguelen Plateau	Trevor Smith	1250	FCT-3	28.201	0.083	Kuiper et al., 2008			0.00158793	0.255			1.0092	0.001	0.9983	2E-13	23	JUL	2013	11	25	1	OSU2C13	0.00	0.00	37.70	Kerguelen	13C2060	01
		13C2071	1400 °C	253-12	Groundmass	Kerguelen Plateau	Trevor Smith	1400	FCT-3	28.201	0.083	Kuiper et al., 2008			0.00158793	0.255			1.0092	0.001	0.9984	2E-13	23	JUL	2013	12	18	1	OSU2C13	0.00	0.00	37.70	Kerguelen	13C2060	01



Irradiation Constants		OSU Argon Geochronology Lab																										
		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	
13C2060	500 °C	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0	
13C2062	600 °C	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0	
13C2063	700 °C	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0	
13C2065	800 °C	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0	
13C2066	900 °C	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0	
13C2068	1050 °C	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0	
13C2069	1250 °C	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0	
13C2071	1400 °C	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0	



13C2060.AGE >>> 253-12 >>> KERGUELEN PROJECT



Ar-Ages in Ma

WEIGHTED PLATEAU

1.46 ± 0.19

TOTAL FUSION

1.39 ± 0.19

NORMAL ISOCHRON

0.92 ± 0.66

INVERSE ISOCHRON

0.92 ± 0.49

MSWD (PROBABILITY)

1.40 (20%)

Sample Info

Groundmass

Kerguelen Plateau

Kyle Krawl

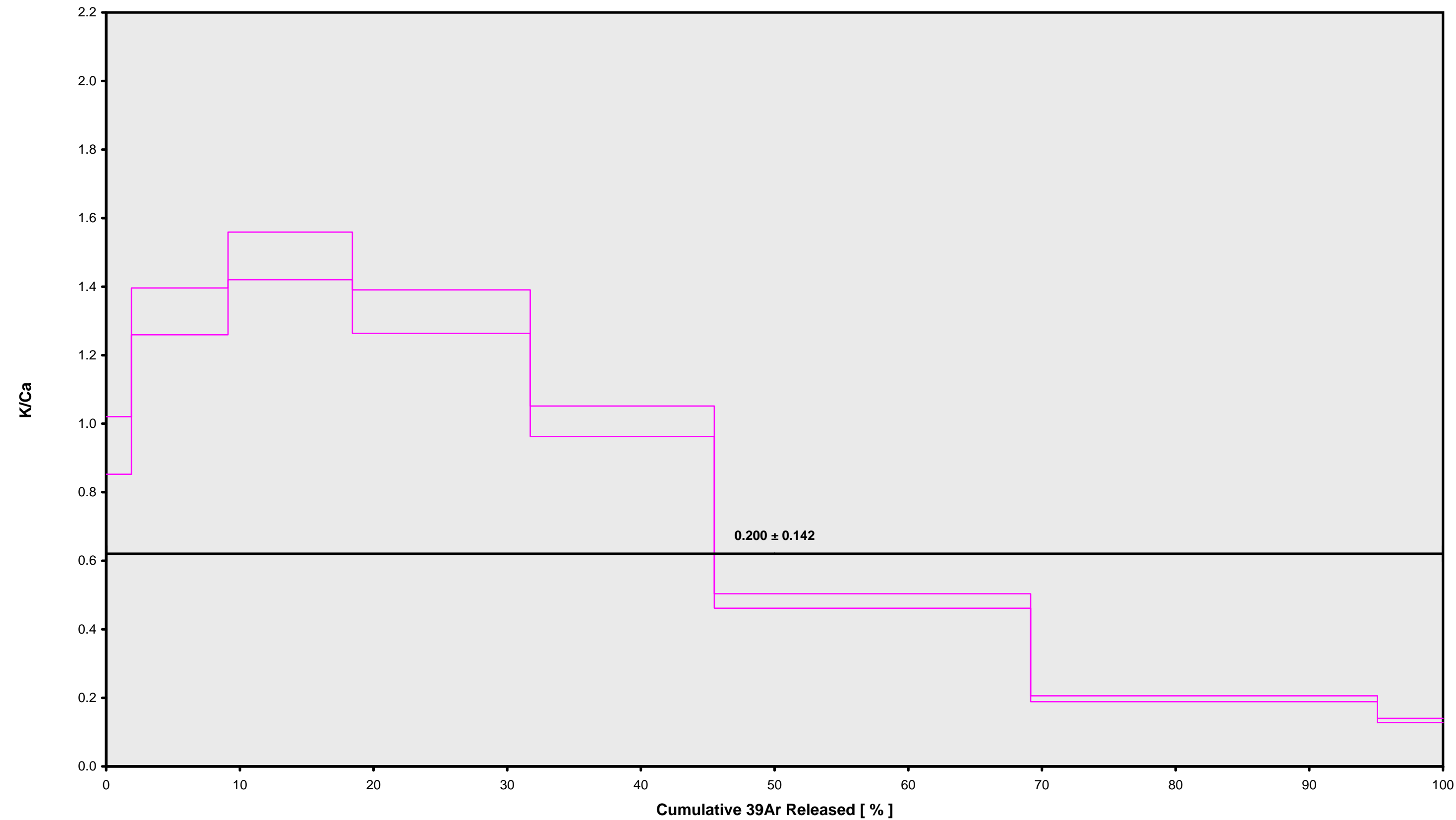
IRR = OSU2C13

J = 0.00158793 ± 0.00000405

RECALIBRATED AGE



13C2060.AGE >>> 253-12 >>> KERGUELEN PROJECT



Ar-Ages in Ma

WEIGHTED PLATEAU

1.46 ± 0.19

TOTAL FUSION

1.39 ± 0.19

NORMAL ISOCHRON

0.92 ± 0.66

INVERSE ISOCHRON

0.92 ± 0.49

Sample Info

Groundmass

Kerguelen Plateau

Kyle Krawl

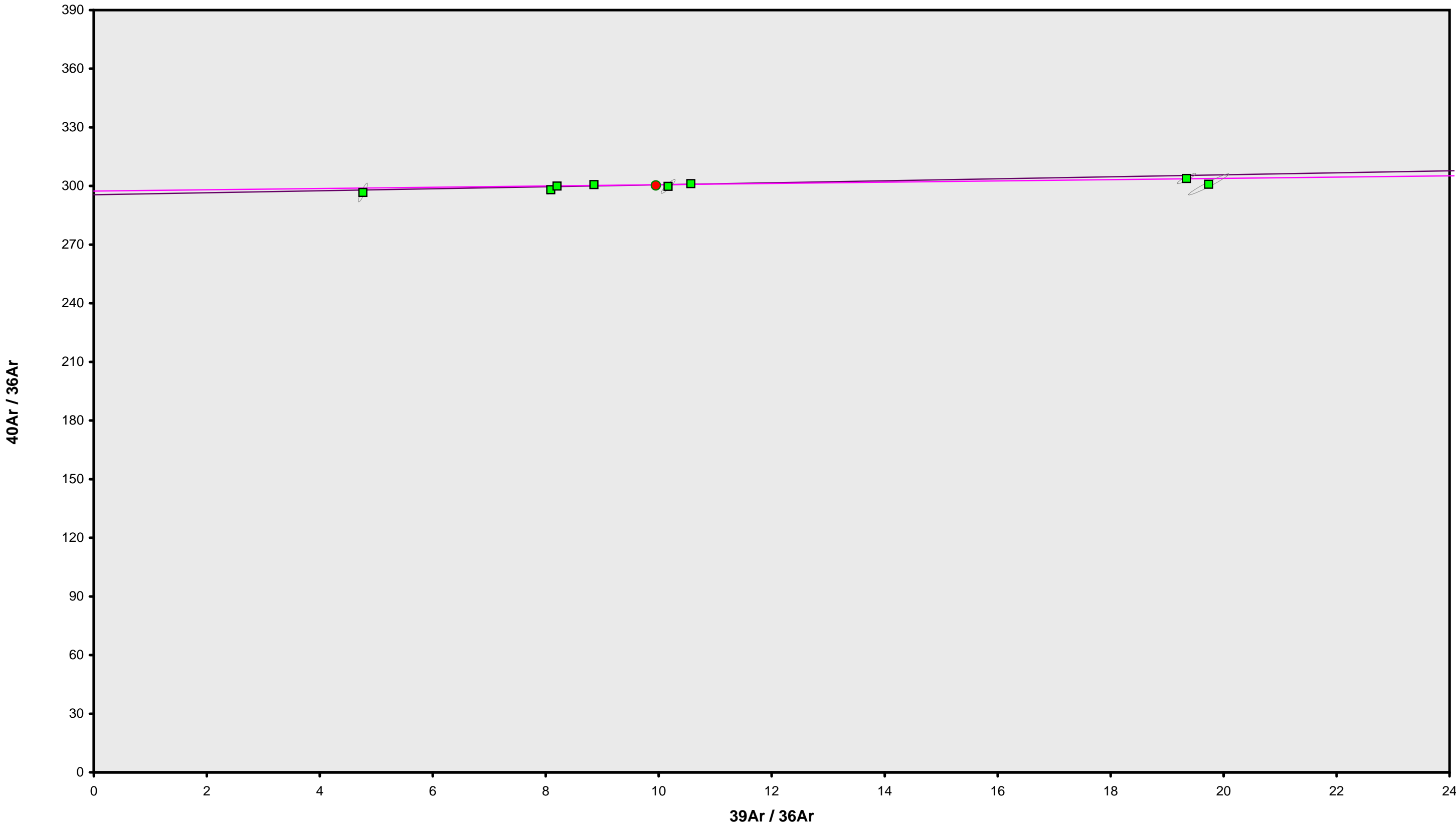
IRR = OSU2C13

J = 0.00158793 ± 0.00000405

RECALIBRATED AGE



13C2060.AGE >>> 253-12 >>> KERGUELEN PROJECT



Ar-Ages in Ma

WEIGHTED PLATEAU

1.46 ± 0.19

TOTAL FUSION

1.39 ± 0.19

NORMAL ISOCHRON

0.92 ± 0.66

INVERSE ISOCHRON

0.92 ± 0.49

MSWD (PROBABILITY)

1.10 (36%)

40AR/36AR INTERCEPT

297.4 ± 2.3

Sample Info

Groundmass

Kerguelen Plateau

Kyle Krawl

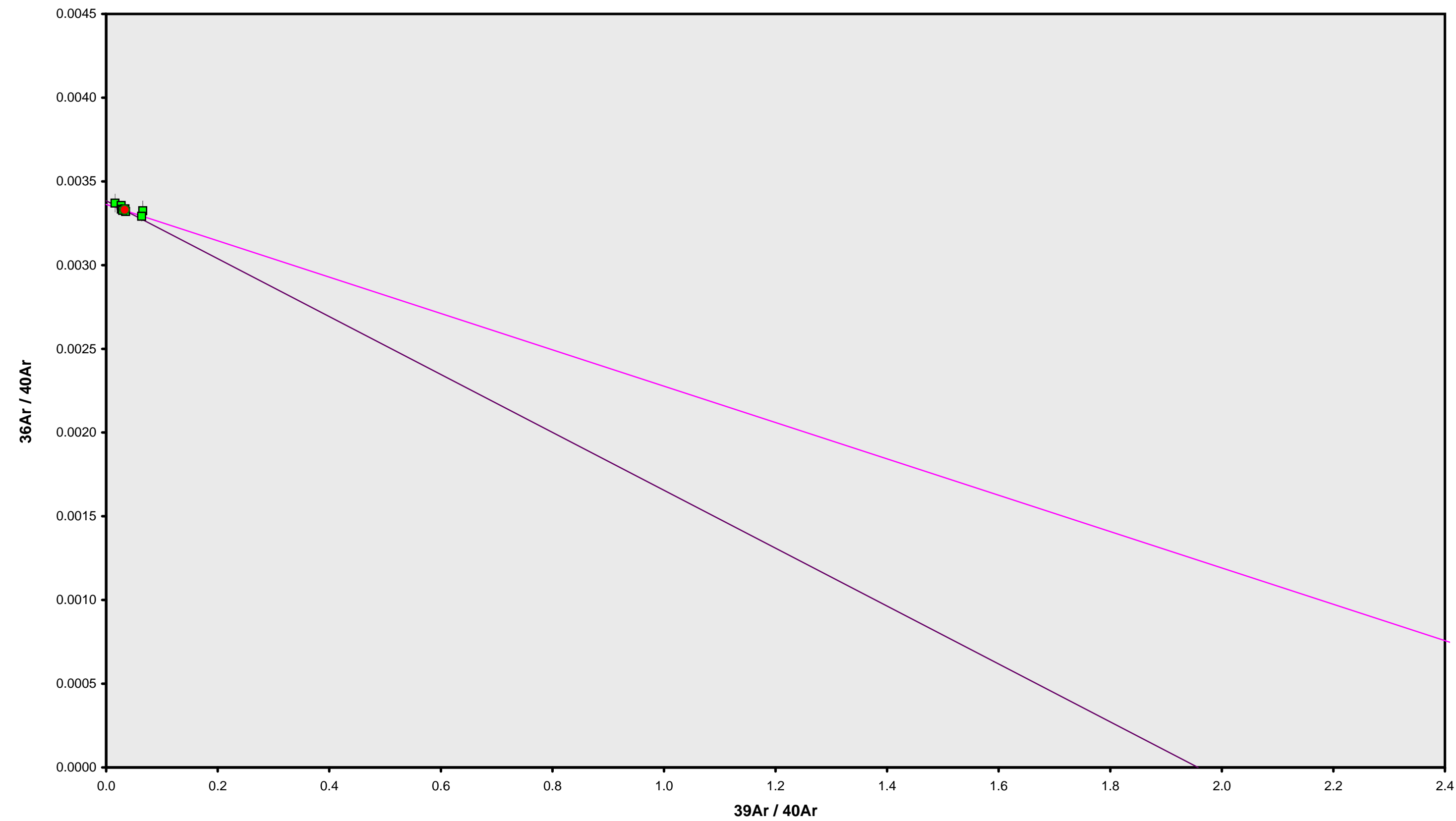
IRR = OSU2C13

J = 0.00158793 ± 0.00000405

RECALIBRATED AGE



13C2060.AGE >>> 253-12 >>> KERGUELEN PROJECT



Ar-Ages in Ma

WEIGHTED PLATEAU

$1.46 \pm 0.19$

TOTAL FUSION

$1.39 \pm 0.19$

NORMAL ISOCHRON

$0.92 \pm 0.66$

INVERSE ISOCHRON

$0.92 \pm 0.49$

MSWD (PROBABILITY)

1.09 (36%)

SPREADING FACTOR

1.6%

40AR/36AR INTERCEPT

$297.4 \pm 2.3$

Sample Info

Groundmass

Kerguelen Plateau

Kyle Krawl

IRR = OSU2C13

$J = 0.00158793 \pm 0.00000405$

RECALIBRATED AGE



Incremental Heating			36Ar(a) [V]	37Ar(ca) [V]	38Ar(cl) [V]	39Ar(k) [V]	40Ar(r) [V]	Age ± 2σ (Ma)	40Ar(r) (%)	39Ar(k) (%)	K/Ca ± 2σ
13C2047	500 °C	✓	0.0010531	0.0037492	0.0000936	0.0035224	0.0262443	21.40 ± 11.41	7.78	0.87	0.404 ± 0.052
13C2049	600 °C	✓	0.0031621	0.0142231	0.0000863	0.0124282	0.0814712	18.84 ± 2.75	8.02	3.07	0.376 ± 0.020
13C2050	700 °C	✓	0.0024568	0.0228316	0.0000842	0.0193009	0.1212498	18.06 ± 1.61	14.31	4.76	0.364 ± 0.017
13C2052	800 °C	✓	0.0034023	0.0513710	0.0000471	0.0497646	0.3341709	19.30 ± 0.88	24.95	12.28	0.417 ± 0.018
13C2053	900 °C	✓	0.0026344	0.0663081	0.0000468	0.0818726	0.5398139	18.95 ± 0.41	40.95	20.19	0.531 ± 0.023
13C2055	1050 °C	✓	0.0020027	0.1376876	0.0003485	0.1251635	0.8070801	18.54 ± 0.23	57.69	30.87	0.391 ± 0.017
13C2056	1250 °C	✓	0.0011817	0.2078555	0.0003768	0.0856788	0.5443841	18.27 ± 0.26	60.92	21.13	0.177 ± 0.008
13C2058	1400 °C	✓	0.0005542	0.0802180	0.0001210	0.0276796	0.1678350	17.44 ± 1.77	50.61	6.83	0.148 ± 0.006
Σ			0.0164473	0.5842442	0.0012043	0.4054106	2.6222493				

Information on Analysis	Results	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD	39Ar(k) (%,n)	K/Ca ± 2σ
Sample = 177-3 Material = Groundmass Location = Kerguelen Plateau Analyst = Trevor Smith Project = KERGUELEN Mass Discrimination Law = LIN Irradiation = OSU2C13 J = 0.00160172 ± 0.00000405 FCT-3 = 28.201 ± 0.023 Ma	Age Plateau	6.44023 ± 0.07602	18.51 ± 0.24	1.93	100.00	0.226 ± 0.085
	Recalibrated	± 1.18%	± 1.28%	6%	8	
			Full External Error ± 0.48	2.07	2σ Confidence Limit	
			Analytical Error ± 0.22	1.3889	Error Magnification	
	Total Fusion Age	6.46813 ± 0.08852	18.59 ± 0.27		8	0.298 ± 0.006
	Recalibrated	± 1.37%	± 1.45%			
			Full External Error ± 0.50			
			Analytical Error ± 0.25			



Normal Isochron			39(k)/36(a) ± 2σ	40(a+r)/36(a) ± 2σ	r.i.
13C2047	500 °C	✓	3.34 ± 0.16	320.42 ± 14.49	0.9451
13C2049	600 °C	✓	3.93 ± 0.06	321.27 ± 4.10	0.8476
13C2050	700 °C	✓	7.86 ± 0.12	344.85 ± 5.15	0.9580
13C2052	800 °C	✓	14.63 ± 0.22	393.72 ± 5.96	0.9921
13C2053	900 °C	✓	31.08 ± 0.46	500.41 ± 7.44	0.9890
13C2055	1050 °C	✓	62.50 ± 1.05	698.49 ± 11.70	0.9866
13C2056	1250 °C	✓	72.51 ± 1.61	756.18 ± 16.74	0.9947
13C2058	1400 °C	✓	49.95 ± 5.21	598.34 ± 62.35	0.9996

Results	40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD
Normal Isochron Recalibrated	297.56 ± 3.68 ± 1.24%	6.39367 ± 0.10793 ± 1.69%	18.38 ± 0.32 ± 1.75%	1.87 8%
Full External Error ± 0.52 Analytical Error ± 0.31				
Statistics	2σ Confidence Limit Error Magnification Number of Data Points	2.15 1.3680 8	Convergence Number of Iterations Calculated Line	0.000000053233 37 Weighted York-2



Inverse Isochron			39(k)/40(a+r) ± 2σ	36(a)/40(a+r) ± 2σ	r.i.
13C2047	500 °C	✓	0.0104386 ± 0.0001631	0.00312090 ± 0.00014112	0.0015
13C2049	600 °C	✓	0.0122341 ± 0.0000965	0.00311269 ± 0.00003969	0.0196
13C2050	700 °C	✓	0.0227809 ± 0.0001009	0.00289979 ± 0.00004327	0.0290
13C2052	800 °C	✓	0.0371506 ± 0.0000711	0.00253987 ± 0.00003847	0.0356
13C2053	900 °C	✓	0.0621056 ± 0.0001374	0.00199836 ± 0.00002972	0.0642
13C2055	1050 °C	✓	0.0894734 ± 0.0002457	0.00143167 ± 0.00002397	0.0545
13C2056	1250 °C	✓	0.0958835 ± 0.0002196	0.00132243 ± 0.00002928	0.0212
13C2058	1400 °C	✓	0.0834728 ± 0.0002450	0.00167128 ± 0.00017415	0.0033

Results	40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD
Inverse Isochron Recalibrated	297.61 ± 3.66 ± 1.23%	6.39566 ± 0.10750 ± 1.68%	18.39 ± 0.32 ± 1.75%	1.84 9%
Full External Error ± 0.52 Analytical Error ± 0.31				
Statistics	2σ Confidence Limit	2.15	Convergence	0.0000000255
	Error Magnification	1.3556	Number of Iterations	4
	Number of Data Points	8	Calculated Line	Weighted York-2
	Spreading Factor	54.6%		



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Relative Abundances			40Ar		39Ar		38Ar		37Ar		36Ar		40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	40Ar(r) (%)	39Ar(k) (%)	K/Ca ± 2σ
			[V]	1σ	[V]	1σ	[V]	1σ	[V]	1σ	[V]	1σ					
13C2047	500 °C	✓	0.3374436	0.0001741	0.0035249	0.0000275	0.0003310	0.0000236	0.0037492	0.0002374	0.0010541	0.0000238	7.45067 ± 3.99677	21.40 ± 11.41	7.78	0.87	0.404 ± 0.052
13C2049	600 °C	✓	1.0158795	0.0007126	0.0124378	0.0000482	0.0008207	0.0000223	0.0142231	0.0003747	0.0031659	0.0000200	6.55535 ± 0.96095	18.84 ± 2.75	8.02	3.07	0.376 ± 0.020
13C2050	700 °C	✓	0.8472572	0.0005863	0.0193162	0.0000406	0.0007662	0.0000235	0.0228316	0.0005221	0.0024629	0.0000183	6.28209 ± 0.56282	18.06 ± 1.61	14.31	4.76	0.364 ± 0.017
13C2052	800 °C	✓	1.3395871	0.0006803	0.0497992	0.0000403	0.0012565	0.0000290	0.0513710	0.0011133	0.0034158	0.0000257	6.71503 ± 0.30674	19.30 ± 0.88	24.95	12.28	0.417 ± 0.018
13C2053	900 °C	✓	1.3183622	0.0009585	0.0819172	0.0000683	0.0014801	0.0000370	0.0663081	0.0014269	0.0026519	0.0000195	6.59334 ± 0.14310	18.95 ± 0.41	40.95	20.19	0.531 ± 0.023
13C2055	1050 °C	✓	1.3990182	0.0011073	0.1252562	0.0001404	0.0021663	0.0000237	0.1376876	0.0029574	0.0020392	0.0000167	6.44820 ± 0.08207	18.54 ± 0.23	57.69	30.87	0.391 ± 0.017
13C2056	1250 °C	✓	0.8936589	0.0004630	0.0858187	0.0000874	0.0016016	0.0000215	0.2078555	0.0044540	0.0012366	0.0000130	6.35378 ± 0.09171	18.27 ± 0.26	60.92	21.13	0.177 ± 0.008
13C2058	1400 °C	✓	0.3316279	0.0001661	0.0277336	0.0000382	0.0005508	0.0000313	0.0802180	0.0017493	0.0005754	0.0000289	6.06349 ± 0.61683	17.44 ± 1.77	50.61	6.83	0.148 ± 0.006
Σ			7.4828344	0.0019317	0.4058038	0.0001995	0.0089731	0.0000763	0.5842442	0.0059489	0.0166018	0.0000602					

Information on Analysis and Constants Used in Calculations		Results						
		40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD	39Ar(k) (%.n)	K/Ca ± 2σ	
Sample = 177-3	Age Equations = Min et al. (2000)							
Material = Groundmass	Negative Intensities = Allowed							
Location = Kerguelen Plateau	Decay Constant 40K = 5.543 ± 0.044 E-10 1/a							
Analyst = Trevor Smith	Decay Constant 39Ar = 2.940 ± 0.029 E-07 1/h							
Project = KERGUELEN	Decay Constant 37Ar = 8.230 ± 0.082 E-04 1/h							
Mass Discrimination Law = LIN	Decay Constant 36Cl = 2.236 ± 0.045 E-06 1/a							
Irradiation = OSU2C13	Decay Constant 40K(EC,β <sup>+</sup> ) = 0.580 ± 0.009 E-10 1/a							
J = 0.00160172 ± 0.00000405	Decay Constant 40K(β <sup>-</sup> ) = 4.950 ± 0.043 E-10 1/a							
FCT-3 = 28.201 ± 0.023 Ma	Atmospheric Ratio 40/36(a) = 295.50							
IGSN = Undefined	Atmospheric Ratio 38/36(a) = 0.1869							
Preferred Age = Undefined	Production Ratio 39/37(ca) = 0.000673							
Classification = Undefined	Production Ratio 38/37(ca) = 0.000139							
Experiment Type = Undefined	Production Ratio 36/37(ca) = 0.000264							
Extraction Method = Undefined	Production Ratio 40/39(k) = 0.001010							
Heating = 0 sec	Production Ratio 38/39(k) = 0.011380							
Isolation = 15.00 min	Production Ratio 36/38(cl) = 316.00 ± 15.80							
Instrument = MAP215-50	Scaling Ratio K/Ca = 0.430							
Lithology = Undefined	Abundance Ratio 40K/K = 1.1700 ± 0.0199 E-04							
Lat-Lon = Undefined - Undefined	Atomic Weight K = 39.0983 ± 0.0001 g							
R1 ratio = Undefined	Recalibrated to FCT-3 Secondary Standard							
R2 ratio = Undefined	Standard Age = 28.201 ± 0.023 Ma							
R3 ratio = Undefined								
R4 ratio = Undefined								
R5 ratio = Undefined								
Collector Calibrations =								



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Degassing Patterns			36Ar(a) [V]	%1σ	36Ar(c) [V]	%1σ	36Ar(ca) [V]	%1σ	36Ar(cl) [V]	%1σ	37Ar(ca) [V]	%1σ	38Ar(a) [V]	%1σ	38Ar(c) [V]	%1σ	38Ar(k) [V]	%1σ	38Ar(ca) [V]	%1σ	38Ar(cl) [V]	%1σ	39Ar(k) [V]	%1σ	39Ar(ca) [V]	%1σ	40Ar(r) [V]	%1σ	40Ar(a) [V]	%1σ	40Ar(c) [V]	%1σ	40Ar(k) [V]	%1σ	
	13C2047	500 °C	✓	0.0010531	2.26	0.0000000	0.00	0.0000010	6.33	0.0000000	26.19	0.0037492	6.33	0.0001968	2.26	0.0000000	0.00	0.0000401	0.78	0.0000005	6.33	0.0000936	26.74	0.0035224	0.78	0.0000025	6.33	0.0262443	26.81	0.3111957	2.26	0.0000000	0.00	0.0000036	0.78
	13C2049	600 °C	✓	0.0031621	0.63	0.0000000	0.00	0.0000038	2.63	0.0000000	26.75	0.0142231	2.63	0.0005910	0.63	0.0000000	0.00	0.0001414	0.39	0.0000020	2.63	0.0000863	27.29	0.0124282	0.39	0.0000096	2.63	0.0814712	7.32	0.9343957	0.63	0.0000000	0.00	0.0000126	0.39
	13C2050	700 °C	✓	0.0024568	0.74	0.0000000	0.00	0.0000060	2.29	0.0000000	28.76	0.0228316	2.29	0.0004592	0.74	0.0000000	0.00	0.0002196	0.21	0.0000032	2.29	0.0000842	29.26	0.0193009	0.21	0.0000154	2.29	0.1212498	4.47	0.7259878	0.74	0.0000000	0.00	0.0000195	0.21
	13C2052	800 °C	✓	0.0034023	0.76	0.0000000	0.00	0.0000136	2.17	0.0000000	62.69	0.0513710	2.17	0.0006359	0.76	0.0000000	0.00	0.0005663	0.08	0.0000071	2.17	0.0000471	62.92	0.0497646	0.08	0.0000346	2.17	0.3341709	2.28	1.0053659	0.76	0.0000000	0.00	0.0000503	0.08
	13C2053	900 °C	✓	0.0026344	0.74	0.0000000	0.00	0.0000175	2.15	0.0000000	79.60	0.0663081	2.15	0.0004924	0.74	0.0000000	0.00	0.0009317	0.08	0.0000092	2.15	0.0000468	79.78	0.0818726	0.08	0.0000446	2.15	0.5398139	1.08	0.7784656	0.74	0.0000000	0.00	0.0000827	0.08
	13C2055	1050 °C	✓	0.0020027	0.83	0.0000000	0.00	0.0000363	2.15	0.0000001	8.74	0.1376876	2.15	0.0003743	0.83	0.0000000	0.00	0.0014244	0.11	0.0000191	2.15	0.0003485	10.26	0.1251635	0.11	0.0000927	2.15	0.8070801	0.63	0.5918117	0.83	0.0000000	0.00	0.0001264	0.11
	13C2056	1250 °C	✓	0.0011817	1.11	0.0000000	0.00	0.0000549	2.14	0.0000001	7.88	0.2078555	2.14	0.0002209	1.11	0.0000000	0.00	0.0009750	0.10	0.0000289	2.14	0.0003768	9.54	0.0856788	0.10	0.0001399	2.14	0.5443841	0.71	0.3491883	1.11	0.0000000	0.00	0.0000865	0.10
	13C2058	1400 °C	✓	0.0005542	5.21	0.0000000	0.00	0.0000212	2.18	0.0000000	26.78	0.0802180	2.18	0.0001036	5.21	0.0000000	0.00	0.0003150	0.14	0.0000112	2.18	0.0001210	27.32	0.0276796	0.14	0.0000540	2.18	0.1678350	5.08	0.1637650	5.21	0.0000000	0.00	0.0000280	0.14
		Σ		0.0164473	0.37	0.0000000	0.00	0.0001542	1.02	0.0000003	6.86	0.5842442	1.02	0.0030740	0.37	0.0000000	0.00	0.0046136	0.05	0.0000812	1.02	0.0012043	7.30	0.4054106	0.05	0.0003932	1.02	2.6222493	0.68	4.8601757	0.37	0.0000000	0.00	0.0004095	0.05
	Σ								0.0166018	0.36	0.5842442	1.02									0.0089731	0.99			0.4058038	0.05							7.4828344	0.34	



Additional Parameters			40Ar/39Ar	1σ	37Ar/39Ar	1σ	36Ar/39Ar	1σ	Time (days)	37Ar (decay)	39Ar (decay)	40Ar (moles)
13C2047	500 °C	✓	95.730398	0.747127	1.063631	0.067844	0.299048	0.007143	107.885	8.443585	1.00076241	6.749E-14
13C2049	600 °C	✓	81.676911	0.321795	1.143537	0.030453	0.254535	0.001889	107.921	8.449610	1.00076266	2.032E-13
13C2050	700 °C	✓	43.862435	0.097086	1.181989	0.027141	0.127502	0.000982	107.940	8.452740	1.00076279	1.695E-13
13C2052	800 °C	✓	26.899775	0.025718	1.031564	0.022372	0.068592	0.000519	107.976	8.458771	1.00076305	2.679E-13
13C2053	900 °C	✓	16.093837	0.017800	0.809453	0.017432	0.032373	0.000239	107.996	8.462137	1.00076319	2.637E-13
13C2055	1050 °C	✓	11.169252	0.015324	1.099248	0.023643	0.016280	0.000134	108.032	8.468174	1.00076345	2.798E-13
13C2056	1250 °C	✓	10.413336	0.011903	2.422031	0.051958	0.014410	0.000152	108.050	8.471195	1.00076357	1.787E-13
13C2058	1400 °C	✓	11.957633	0.017508	2.892451	0.063202	0.020747	0.001041	108.085	8.477007	1.00076382	6.633E-14



Procedure		36Ar		37Ar		38Ar		39Ar		40Ar	
		[V]	1σ	[V]	1σ	[V]	1σ	[V]	1σ	[V]	1σ
13C2047	500 °C	0.0003280	0.0000150	0.0000714	0.0000217	0.0000074	0.0000134	0.0003012	0.0000122	0.0040857	0.0000301
13C2049	600 °C	0.0003019	0.0000149	0.0000150	0.0000169	0.0000339	0.0000202	0.0000416	0.0000201	0.0047574	0.0000179
13C2050	700 °C	0.0003019	0.0000149	0.0000150	0.0000169	0.0000339	0.0000202	0.0000416	0.0000201	0.0047574	0.0000179
13C2052	800 °C	0.0003516	0.0000196	0.0000493	0.0000143	0.0000737	0.0000250	0.0001379	0.0000251	0.0070395	0.0000346
13C2053	900 °C	0.0003516	0.0000196	0.0000493	0.0000143	0.0000737	0.0000250	0.0001379	0.0000251	0.0070395	0.0000346
13C2055	1050 °C	0.0003203	0.0000122	0.0000460	0.0000197	0.0000051	0.0000149	0.0001775	0.0000199	0.0042124	0.0000719
13C2056	1250 °C	0.0003203	0.0000122	0.0000460	0.0000197	0.0000051	0.0000149	0.0001775	0.0000199	0.0042124	0.0000719
13C2058	1400 °C	0.0003056	0.0000180	0.0000350	0.0000213	0.0000174	0.0000211	0.0000808	0.0000218	0.0039479	0.0000507



OSU Argon Geochronology Lab																					
Intercept Values		36Ar				37Ar				38Ar				39Ar				40Ar			
		[M]	1σ	r2		[M]	1σ	r2		[M]	1σ	r2		[M]	1σ	r2		[M]	1σ	r2	
13C2047	500 °C	0.0014236	0.0000196	0.7330	LIN #	0.0005287	0.0000164	0.3279	LIN # 10	0.0003303	0.0000200	0.3381	LIN #	0.0038632	0.0000249	0.9931	EXP #	0.3421794	0.0001718	0.9993	EXP # 1
13C2049	600 °C	0.0035910	0.0000145	0.9722	LIN #	0.0017480	0.0000207	0.1415	LIN # 7	0.0008714	0.0000103	0.0455	LIN # 7	0.0126080	0.0000444	0.9949	EXP #	1.0225797	0.0007137	0.9987	EXP #
13C2050	700 °C	0.0028605	0.0000116	0.9698	EXP # 8	0.0027956	0.0000153	0.9293	EXP # 10	0.0008157	0.0000129	0.2308	LIN # 4 5 8	0.0195556	0.0000358	0.9900	EXP # 1 7 9	0.8535509	0.0005871	0.9988	EXP # 2
13C2052	800 °C	0.0039004	0.0000181	0.9787	LIN # 1 3	0.0063018	0.0000183	0.9873	EXP #	0.0013558	0.0000158	0.5076	LIN # 2	0.0504519	0.0000321	0.9929	EXP #	1.3491901	0.0006808	0.9995	EXP # 2
13C2053	900 °C	0.0031069	0.0000049	0.9948	LIN # 3 8	0.0081165	0.0000159	0.9950	EXP #	0.0015840	0.0000282	0.1755	LIN #	0.0829018	0.0000642	0.9983	EXP # 8 10	1.3279248	0.0009597	0.9985	EXP #
13C2055	1050 °C	0.0024390	0.0000123	0.8846	LIN # 1 5	0.0167854	0.0000317	0.9967	EXP #	0.0022155	0.0000190	0.8459	LIN #	0.1267281	0.0001404	0.9983	EXP # 7 8	1.4059018	0.0011071	0.9989	EXP # 2 3
13C2056	1250 °C	0.0016053	0.0000058	0.8553	LIN # 8 10	0.0253045	0.0000359	0.9984	EXP #	0.0016391	0.0000161	0.7856	LIN #	0.0868744	0.0000860	0.9982	EXP #	0.8994904	0.0004582	0.9996	EXP # 2 3 4
13C2058	1400 °C	0.0009038	0.0000240	0.1959	LIN # 8	0.0097764	0.0000363	0.9882	EXP #	0.0005794	0.0000239	0.1848	LIN #	0.0280982	0.0000318	0.9969	EXP # 5	0.3361810	0.0001585	0.9991	EXP # 1



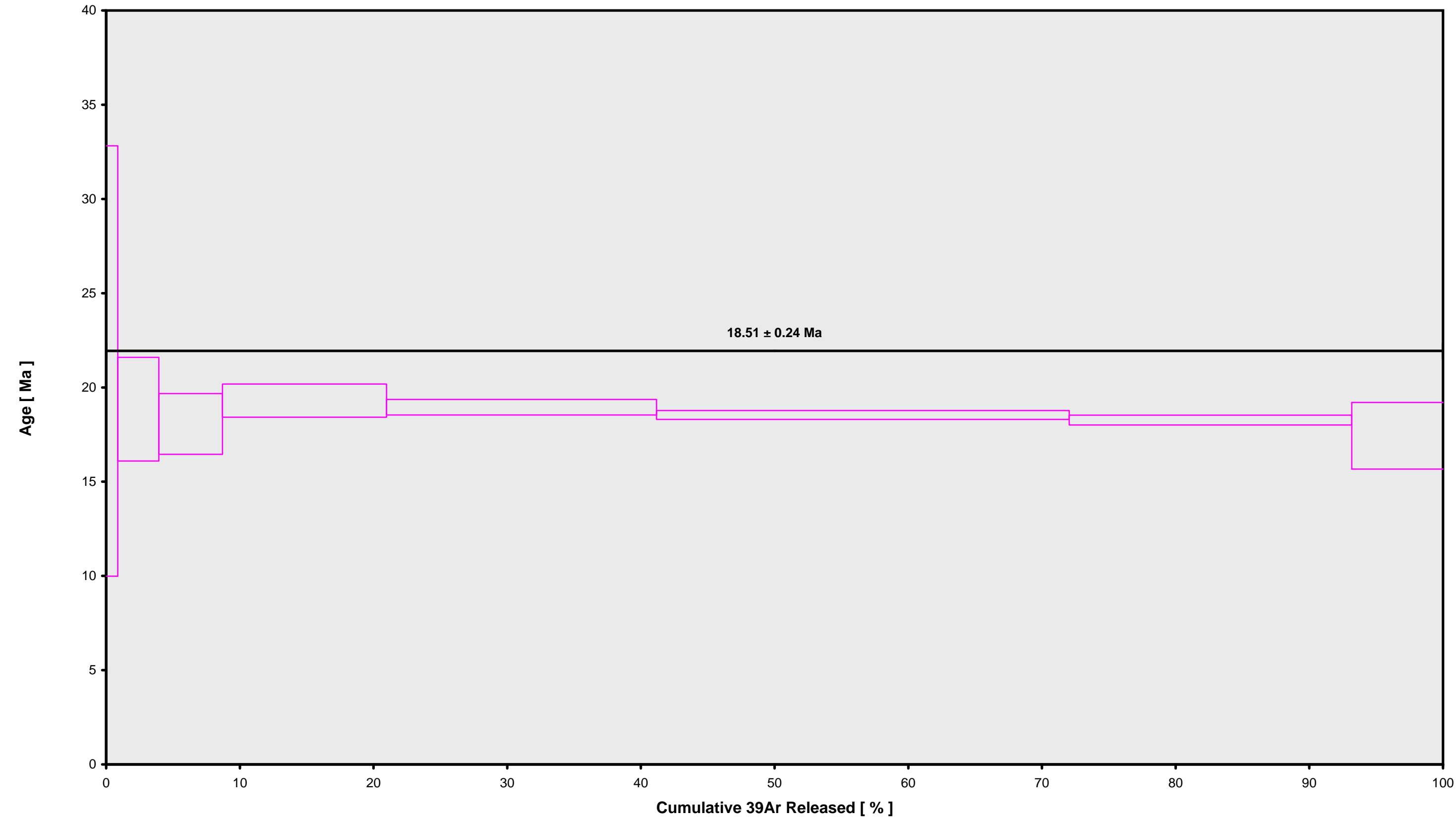
OSU Argon Geochronology Lab																																		
Sample Parameters			Sample	Material	Location	Analyst	Temp	Standard Name	Standard (in Ma)	%1σ	Standard Reference	Standard 40Ar/39Ar	%1σ	J	%1σ	Air 40Ar/36Ar	%1σ	MDF	%1σ	Volume Ratio	Sensitivity (mol/volt)	Day	Month	Year	Hour	Min	Resist	Irradiation	X-pos	Y-pos	Z/H-pos	Project	Experiment	Nmb
	13C2047	500 °C	177-3	Groundmass	Kerguelen Plateau	Trevor Smith	500	FCT-3	28.201	0.083	Kuiper et al., 2008			0.00160172	0.253			1.0092	0.001	0.9981	2E-13	22	JUL	2013	13	15	1	OSU2C13	0.00	0.00	34.60	Kerguelen	13C2047	01
	13C2049	600 °C	177-3	Groundmass	Kerguelen Plateau	Trevor Smith	600	FCT-3	28.201	0.083	Kuiper et al., 2008			0.00160172	0.253			1.0092	0.001	0.9981	2E-13	22	JUL	2013	14	7	1	OSU2C13	0.00	0.00	34.60	Kerguelen	13C2047	01
	13C2050	700 °C	177-3	Groundmass	Kerguelen Plateau	Trevor Smith	700	FCT-3	28.201	0.083	Kuiper et al., 2008			0.00160172	0.253			1.0092	0.001	0.9982	2E-13	22	JUL	2013	14	34	1	OSU2C13	0.00	0.00	34.60	Kerguelen	13C2047	01
	13C2052	800 °C	177-3	Groundmass	Kerguelen Plateau	Trevor Smith	800	FCT-3	28.201	0.083	Kuiper et al., 2008			0.00160172	0.253			1.0092	0.001	0.9981	2E-13	22	JUL	2013	15	26	1	OSU2C13	0.00	0.00	34.60	Kerguelen	13C2047	01
	13C2053	900 °C	177-3	Groundmass	Kerguelen Plateau	Trevor Smith	900	FCT-3	28.201	0.083	Kuiper et al., 2008			0.00160172	0.253			1.0092	0.001	0.9981	2E-13	22	JUL	2013	15	55	1	OSU2C13	0.00	0.00	34.60	Kerguelen	13C2047	01
	13C2055	1050 °C	177-3	Groundmass	Kerguelen Plateau	Trevor Smith	1050	FCT-3	28.201	0.083	Kuiper et al., 2008			0.00160172	0.253			1.0092	0.001	0.9981	2E-13	22	JUL	2013	16	47	1	OSU2C13	0.00	0.00	34.60	Kerguelen	13C2047	01
	13C2056	1250 °C	177-3	Groundmass	Kerguelen Plateau	Trevor Smith	1250	FCT-3	28.201	0.083	Kuiper et al., 2008			0.00160172	0.253			1.0092	0.001	0.9982	2E-13	22	JUL	2013	17	13	1	OSU2C13	0.00	0.00	34.60	Kerguelen	13C2047	01
13C2058	1400 °C	177-3		Groundmass	Kerguelen Plateau	Trevor Smith	1400	FCT-3	28.201	0.083	Kuiper et al., 2008			0.00160172	0.253			1.0092	0.001	0.9982	2E-13	22	JUL	2013	18	3	1	OSU2C13	0.00	0.00	34.60	Kerguelen	13C2047	01



Irradiation Constants		OSU Argon Geochronology Lab																										
		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	
13C2047	500 °C	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0	0
13C2049	600 °C	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0	0
13C2050	700 °C	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0	0
13C2052	800 °C	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0	0
13C2053	900 °C	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0	0
13C2055	1050 °C	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0	0
13C2056	1250 °C	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0	0
13C2058	1400 °C	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0	0



13C2047.AGE >>> 177-3 >>> KERGUELEN PROJECT



Ar-Ages in Ma

WEIGHTED PLATEAU

$18.51 \pm 0.24$

TOTAL FUSION

$18.59 \pm 0.27$

NORMAL ISOCHRON

$18.38 \pm 0.32$

INVERSE ISOCHRON

$18.39 \pm 0.32$

MSWD (PROBABILITY)

1.93 (6%)

Sample Info

Groundmass

Kerguelen Plateau

Trevor Smith

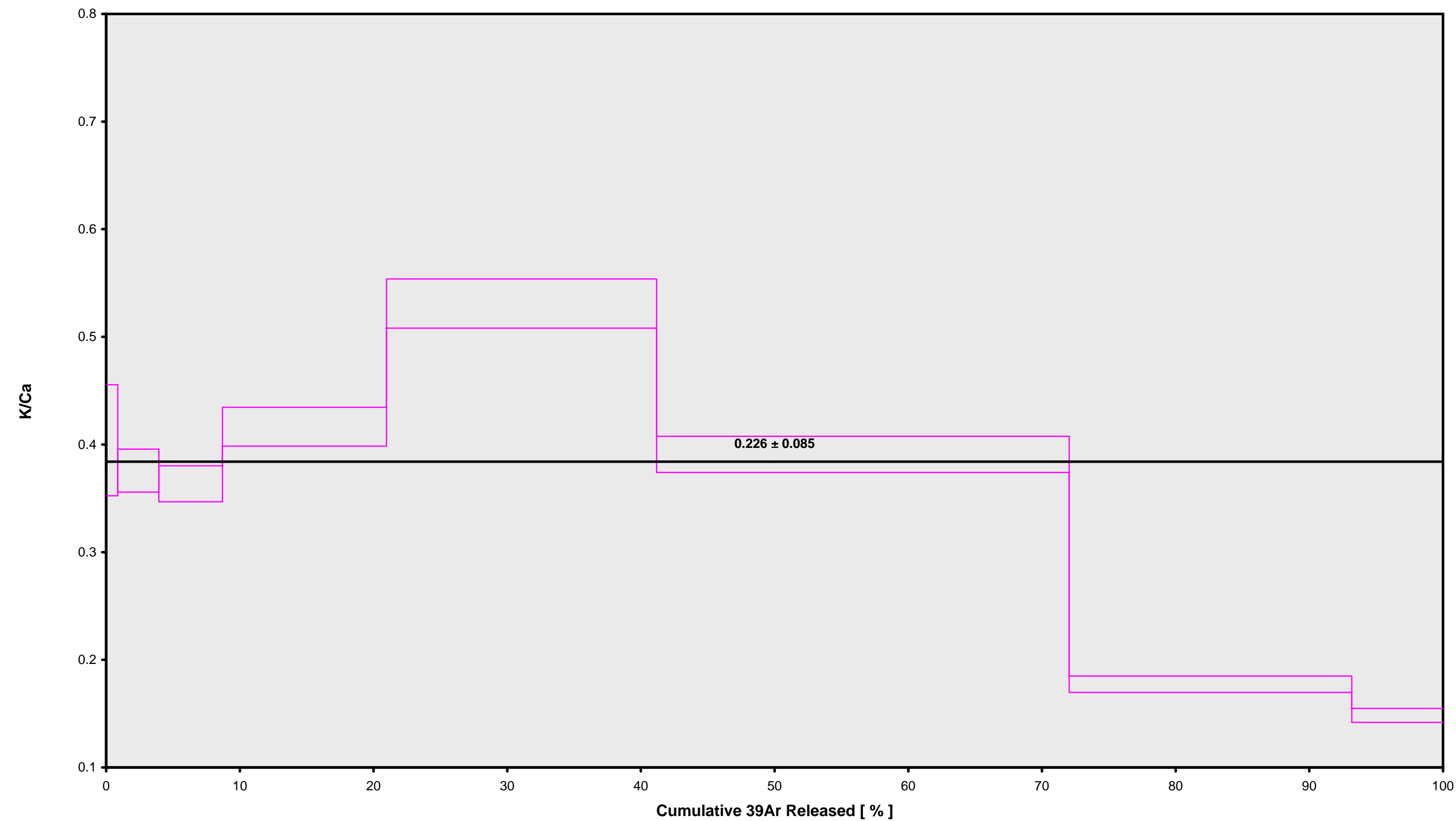
IRR = OSU2C13

J =  $0.00160172 \pm 0.00000405$

RECALIBRATED AGE



13C2047.AGE >>> 177-3 >>> KERGUELEN PROJECT



**Ar-Ages in Ma**

**WEIGHTED PLATEAU**  
18.51 ± 0.24

**TOTAL FUSION**  
18.59 ± 0.27

**NORMAL ISOCHRON**  
18.38 ± 0.32

**INVERSE ISOCHRON**  
18.39 ± 0.32

**Sample Info**

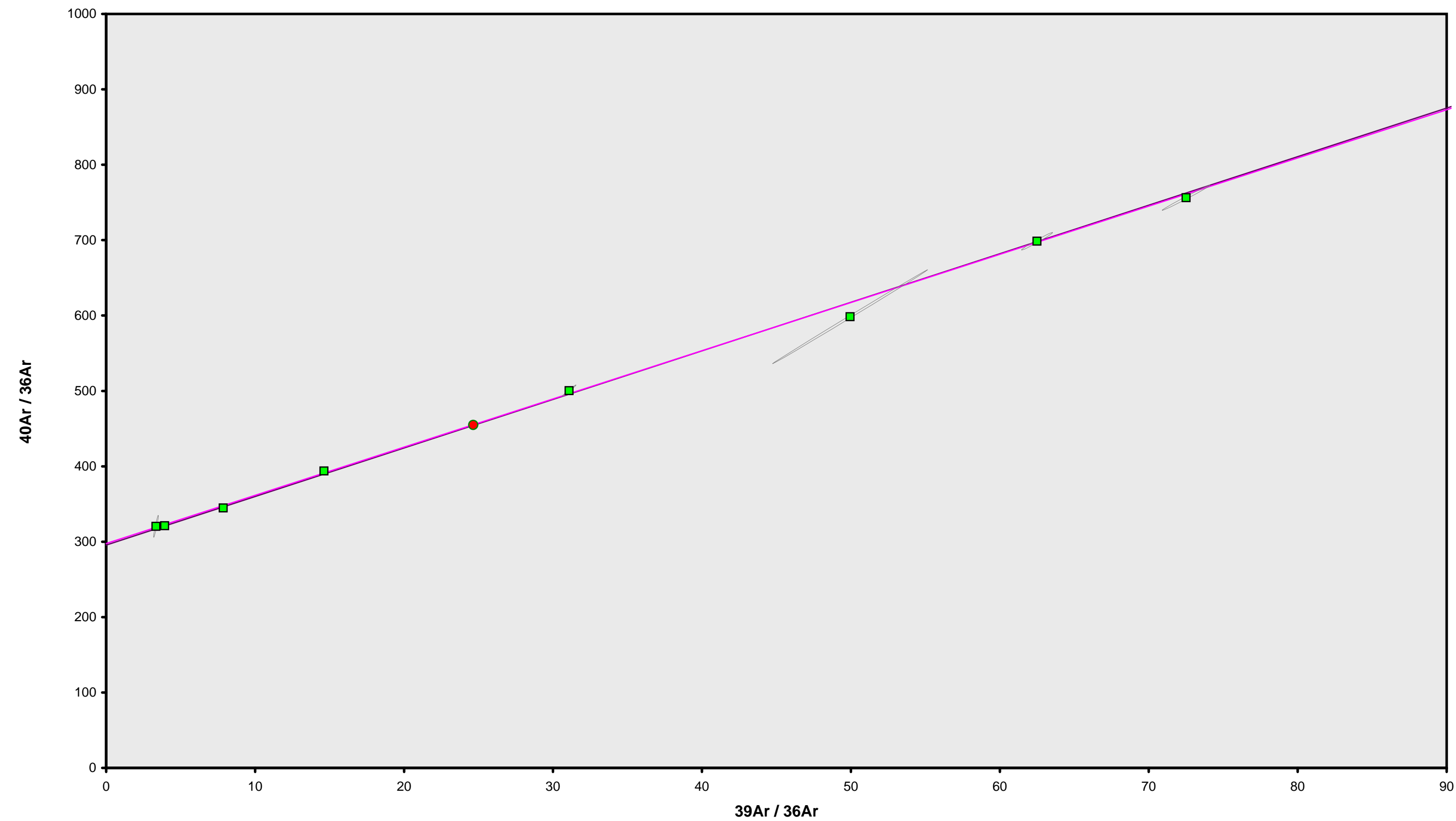
Groundmass  
Kerguelen Plateau  
Trevor Smith

IRR = OSU2C13  
J = 0.00160172 ± 0.00000405

**RECALIBRATED AGE**



13C2047.AGE >>> 177-3 >>> KERGUELEN PROJECT



**Ar-Ages in Ma**

**WEIGHTED PLATEAU**  
18.51 ± 0.24

**TOTAL FUSION**  
18.59 ± 0.27

**NORMAL ISOCHRON**  
18.38 ± 0.32

**INVERSE ISOCHRON**  
18.39 ± 0.32

**MSWD (PROBABILITY)**  
1.87 (8%)

**40AR/36AR INTERCEPT**  
297.6 ± 3.7

**Sample Info**

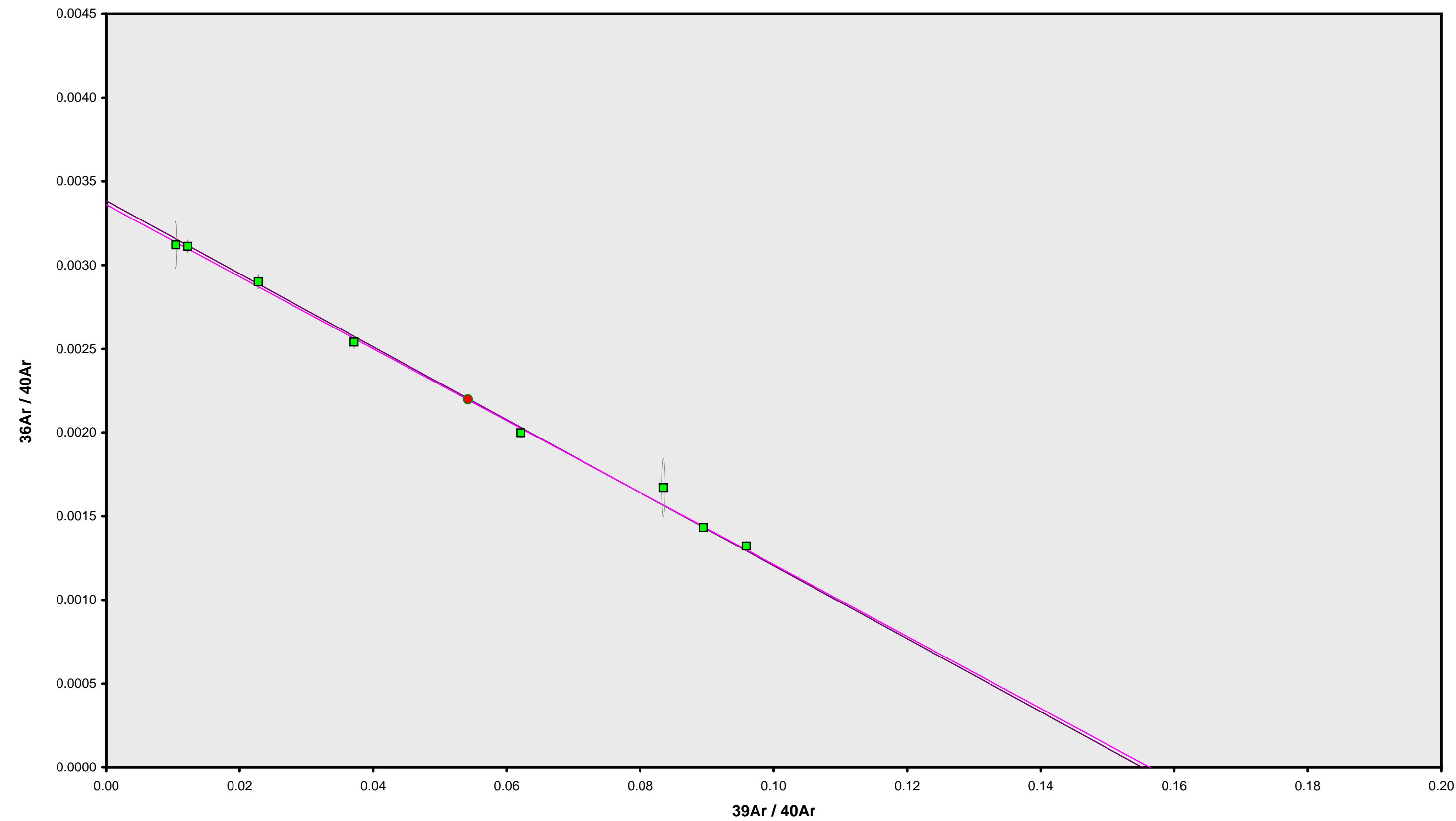
Groundmass  
Kerguelen Plateau  
Trevor Smith

IRR = OSU2C13  
J = 0.00160172 ± 0.00000405

RECALIBRATED AGE



13C2047.AGE >>> 177-3 >>> KERGUELEN PROJECT



**Ar-Ages in Ma**

**WEIGHTED PLATEAU**  
18.51 ± 0.24

**TOTAL FUSION**  
18.59 ± 0.27

**NORMAL ISOCHRON**  
18.38 ± 0.32

**INVERSE ISOCHRON**  
18.39 ± 0.32

**MSWD (PROBABILITY)**  
1.84 (9%)

**SPREADING FACTOR**  
54.6%

**40AR/36AR INTERCEPT**  
297.6 ± 3.7

**Sample Info**

Groundmass  
Kerguelen Plateau  
Trevor Smith

IRR = OSU2C13  
J = 0.00160172 ± 0.00000405

**RECALIBRATED AGE**



Incremental Heating			36Ar(a) [V]	37Ar(ca) [V]	38Ar(cl) [V]	39Ar(k) [V]	40Ar(r) [V]	Age ± 2σ (Ma)	40Ar(r) (%)	39Ar(k) (%)	K/Ca ± 2σ
13C2034	500 °C	✓	0.0005677	0.0023003	0.0000164	0.0018868	0.0181657	28.00 ± 19.71	9.77	0.31	0.353 ± 0.120
13C2036	600 °C	✓	0.0026117	0.0108237	0.0001430	0.0134749	0.0936339	20.25 ± 2.90	10.82	2.23	0.535 ± 0.044
13C2037	700 °C	✓	0.0037886	0.0230247	0.0001871	0.0426712	0.2508751	17.15 ± 1.05	18.31	7.06	0.797 ± 0.043
13C2039	800 °C	✓	0.0066937	0.0699968	0.0002907	0.1393815	0.8199830	17.16 ± 0.46	29.30	23.05	0.856 ± 0.038
13C2040	900 °C	✓	0.0038458	0.0659962	0.0001437	0.1328882	0.7826154	17.18 ± 0.32	40.78	21.97	0.866 ± 0.038
13C2042	1050 °C	✓	0.0020091	0.0850496	0.0001896	0.1257864	0.7493052	17.38 ± 0.29	55.79	20.80	0.636 ± 0.028
13C2043	1250 °C	✓	0.0008508	0.2043967	0.0001837	0.1052569	0.6106268	16.93 ± 0.39	70.83	17.40	0.221 ± 0.010
13C2045	1400 °C	✓	0.0003198	0.1113390	0.0000570	0.0434556	0.2501011	16.79 ± 0.88	72.57	7.19	0.168 ± 0.007
Σ			0.0206873	0.5729270	0.0012112	0.6048017	3.5753063				

Information on Analysis	Results	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD	39Ar(k) (%,n)	K/Ca ± 2σ
Sample = 189-1 Material = Groundmass Location = Kerguelen Plateau Analyst = Kyle Krawl Project = KERGUELEN Mass Discrimination Law = LIN Irradiation = OSU2C13 J = 0.00162479 ± 0.00000405 FCT-3 = 28.201 ± 0.023 Ma	Age Plateau	5.89344 ± 0.06953	17.19 ± 0.22	1.43	100.00	0.249 ± 0.134
	Recalibrated	± 1.18%	± 1.27%	19%	8	
			Full External Error ± 0.45	2.07	2σ Confidence Limit	
			Analytical Error ± 0.20	1.1946	Error Magnification	
	Total Fusion Age	5.91154 ± 0.07052	17.25 ± 0.22		8	0.454 ± 0.009
	Recalibrated	± 1.19%	± 1.29%			
			Full External Error ± 0.45			
			Analytical Error ± 0.20			



Normal Isochron			39(k)/36(a) ± 2σ	40(a+r)/36(a) ± 2σ	r.i.
13C2034	500 °C	✓	3.32 ± 0.38	327.50 ± 24.93	0.6517
13C2036	600 °C	✓	5.16 ± 0.11	331.35 ± 5.73	0.7793
13C2037	700 °C	✓	11.26 ± 0.16	361.72 ± 4.93	0.9338
13C2039	800 °C	✓	20.82 ± 0.23	418.00 ± 4.61	0.9806
13C2040	900 °C	✓	34.55 ± 0.45	499.00 ± 6.32	0.9651
13C2042	1050 °C	✓	62.61 ± 1.28	668.45 ± 13.67	0.9852
13C2043	1250 °C	✓	123.72 ± 6.87	1013.22 ± 56.14	0.9977
13C2045	1400 °C	✓	135.89 ± 18.77	1077.61 ± 148.77	0.9987

Results	40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD
Normal Isochron Recalibrated	297.71 ± 3.43 ± 1.15%	5.83626 ± 0.10721 ± 1.84%	17.03 ± 0.32 ± 1.89%	1.29 26%
Full External Error ± 0.50 Analytical Error ± 0.31				
Statistics	2σ Confidence Limit Error Magnification Number of Data Points	2.15 1.1373 8	Convergence Number of Iterations Calculated Line	0.000000052907 60 Weighted York-2



Inverse Isochron			39(k)/40(a+r) ± 2σ	36(a)/40(a+r) ± 2σ	r.i.
13C2034	500 °C	✓	0.0101477 ± 0.0008887	0.00305347 ± 0.00023247	0.0101
13C2036	600 °C	✓	0.0155709 ± 0.0002069	0.00301794 ± 0.00005221	0.0603
13C2037	700 °C	✓	0.0311378 ± 0.0001571	0.00276458 ± 0.00003766	0.1051
13C2039	800 °C	✓	0.0498150 ± 0.0001093	0.00239234 ± 0.00002640	0.0310
13C2040	900 °C	✓	0.0692466 ± 0.0002344	0.00200402 ± 0.00002540	0.0688
13C2042	1050 °C	✓	0.0936605 ± 0.0003301	0.00149600 ± 0.00003059	0.0693
13C2043	1250 °C	✓	0.1221030 ± 0.0004621	0.00098695 ± 0.00005468	0.0121
13C2045	1400 °C	✓	0.1261062 ± 0.0008771	0.00092798 ± 0.00012811	0.0154

Results	40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD
Inverse Isochron Recalibrated	297.70 ± 3.46 ± 1.16%	5.83945 ± 0.10825 ± 1.85%	17.04 ± 0.33 ± 1.91%	1.31 25%
Full External Error ± 0.50 Analytical Error ± 0.31				
Statistics	2σ Confidence Limit	2.15	Convergence	0.0000000050
	Error Magnification	1.1450	Number of Iterations	5
	Number of Data Points	8	Calculated Line	Weighted York-2
	Spreading Factor	67.7%		



OSU Argon Geochronology Lab																	
Relative Abundances			40Ar		39Ar		38Ar		37Ar		36Ar		40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	40Ar(r) (%)	39Ar(k) (%)	K/Ca ± 2σ
			[V]	1σ	[V]	1σ	[V]	1σ	[V]	1σ	[V]	1σ					
13C2034	500 °C	✓	0.1859364	0.0007641	0.0018884	0.0000823	0.0001443	0.0000288	0.0023003	0.0003781	0.0005684	0.0000215	9.62772 ± 6.83033	28.00 ± 19.71	9.77	0.31	0.353 ± 0.120
13C2036	600 °C	✓	0.8654052	0.0016109	0.0134822	0.0000860	0.0007859	0.0000305	0.0108237	0.0004371	0.0026146	0.0000221	6.94877 ± 1.00068	20.25 ± 2.90	10.82	2.23	0.535 ± 0.044
13C2037	700 °C	✓	1.3704444	0.0018417	0.0426867	0.0000911	0.0013840	0.0000171	0.0230247	0.0006161	0.0037947	0.0000253	5.87925 ± 0.36173	17.15 ± 1.05	18.31	7.06	0.797 ± 0.043
13C2039	800 °C	✓	2.7981236	0.0012110	0.1394286	0.0001404	0.0031377	0.0000213	0.0699968	0.0015313	0.0067123	0.0000368	5.88301 ± 0.15756	17.16 ± 0.46	29.30	23.05	0.856 ± 0.038
13C2040	900 °C	✓	1.9191930	0.0016482	0.1329327	0.0001938	0.0023840	0.0000202	0.0659962	0.0014486	0.0038633	0.0000241	5.88928 ± 0.11153	17.18 ± 0.32	40.78	21.97	0.866 ± 0.038
13C2042	1050 °C	✓	1.3431318	0.0015012	0.1258437	0.0001714	0.0020084	0.0000187	0.0850496	0.0018479	0.0020316	0.0000204	5.95696 ± 0.10019	17.38 ± 0.29	55.79	20.80	0.636 ± 0.028
13C2043	1250 °C	✓	0.8621404	0.0006870	0.1053945	0.0001806	0.0015689	0.0000265	0.2043967	0.0043987	0.0009048	0.0000235	5.80130 ± 0.13441	16.93 ± 0.39	70.83	17.40	0.221 ± 0.010
13C2045	1400 °C	✓	0.3446388	0.0006629	0.0435305	0.0001259	0.0006268	0.0000204	0.1113390	0.0024066	0.0003492	0.0000221	5.75533 ± 0.30348	16.79 ± 0.88	72.57	7.19	0.168 ± 0.007
Σ			9.6890137	0.0037308	0.6051872	0.0003970	0.0120399	0.0000662	0.5729270	0.0058061	0.0208388	0.0000706					

Information on Analysis and Constants Used in Calculations	
Sample = 189-1	Age Equations = Min et al. (2000)
Material = Groundmass	Negative Intensities = Allowed
Location = Kerguelen Plateau	Decay Constant 40K = 5.543 ± 0.044 E-10 1/a
Analyst = Kyle Krawl	Decay Constant 39Ar = 2.940 ± 0.029 E-07 1/h
Project = KERGUELEN	Decay Constant 37Ar = 8.230 ± 0.082 E-04 1/h
Mass Discrimination Law = LIN	Decay Constant 36Cl = 2.236 ± 0.045 E-06 1/a
Irradiation = OSU2C13	Decay Constant 40K(EC,β <sup>+</sup> ) = 0.580 ± 0.009 E-10 1/a
J = 0.00162479 ± 0.00000405	Decay Constant 40K(β <sup>-</sup> ) = 4.950 ± 0.043 E-10 1/a
FCT-3 = 28.201 ± 0.023 Ma	Atmospheric Ratio 40/36(a) = 295.50
IGSN = Undefined	Atmospheric Ratio 38/36(a) = 0.1869
Preferred Age = Undefined	Production Ratio 39/37(ca) = 0.000673
Classification = Undefined	Production Ratio 38/37(ca) = 0.000139
Experiment Type = Undefined	Production Ratio 36/37(ca) = 0.000264
Extraction Method = Undefined	Production Ratio 40/39(k) = 0.001010
Heating = 0 sec	Production Ratio 38/39(k) = 0.011380
Isolation = 15.00 min	Production Ratio 36/38(cl) = 316.00 ± 15.80
Instrument = MAP215-50	Scaling Ratio K/Ca = 0.430
Lithology = Undefined	Abundance Ratio 40K/K = 1.1700 ± 0.0199 E-04
Lat-Lon = Undefined - Undefined	Atomic Weight K = 39.0983 ± 0.0001 g
R1 ratio = Undefined	Recalibrated to FCT-3 Secondary Standard
R2 ratio = Undefined	Standard Age = 28.201 ± 0.023 Ma
R3 ratio = Undefined	
R4 ratio = Undefined	
R5 ratio = Undefined	
Collector Calibrations =	

Results	40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD	39Ar(k) (%.n)	K/Ca ± 2σ
Age Plateau Recalibrated		5.89344 ± 0.06953 ± 1.18%	17.19 ± 0.22 ± 1.27%	1.43 19%	100.00 8	0.249 ± 0.134
			Full External Error ± 0.45	2.07	2σ Confidence Limit	
			Analytical Error ± 0.20	1.1946	Error Magnification	
Total Fusion Age Recalibrated		5.91154 ± 0.07052 ± 1.19%	17.25 ± 0.22 ± 1.29%		8	0.454 ± 0.009
			Full External Error ± 0.45			
			Analytical Error ± 0.20			
Normal Isochron Recalibrated	297.71 ± 3.43 ± 1.15%	5.83626 ± 0.10721 ± 1.84%	17.03 ± 0.32 ± 1.89%	1.29 26%	100.00 8	
			Full External Error ± 0.50	2.15	2σ Confidence Limit	
			Analytical Error ± 0.31	1.1373	Error Magnification	
				60	Number of Iterations	
				0.0000000529	Convergence	
Inverse Isochron Recalibrated	297.70 ± 3.46 ± 1.16%	5.83945 ± 0.10825 ± 1.85%	17.04 ± 0.33 ± 1.91%	1.31 25%	100.00 8	
			Full External Error ± 0.50	2.15	2σ Confidence Limit	
			Analytical Error ± 0.31	1.1450	Error Magnification	
				5	Number of Iterations	
				0.0000000050	Convergence	
				68%	Spreading Factor	



OSU Argon Geochronology Lab																																			
Degassing Patterns			36Ar(a) [V]	%1σ	36Ar(c) [V]	%1σ	36Ar(ca) [V]	%1σ	36Ar(cl) [V]	%1σ	37Ar(ca) [V]	%1σ	38Ar(a) [V]	%1σ	38Ar(c) [V]	%1σ	38Ar(k) [V]	%1σ	38Ar(ca) [V]	%1σ	38Ar(cl) [V]	%1σ	39Ar(k) [V]	%1σ	39Ar(ca) [V]	%1σ	40Ar(r) [V]	%1σ	40Ar(a) [V]	%1σ	40Ar(c) [V]	%1σ	40Ar(k) [V]	%1σ	
	13C2034	500 °C	✓	0.0005677	3.78	0.0000000	0.00	0.0000006	16.44	0.0000000	177.00	0.0023003	16.44	0.0001061	3.78	0.0000000	0.00	0.0000215	4.36	0.0000003	16.44	0.0000164	177.08	0.0018868	4.36	0.0000015	16.44	0.0181657	35.20	0.1677689	3.78	0.0000000	0.00	0.0000019	4.36
	13C2036	600 °C	✓	0.0026117	0.84	0.0000000	0.00	0.0000029	4.04	0.0000000	22.22	0.0108237	4.04	0.0004881	0.84	0.0000000	0.00	0.0001533	0.64	0.0000015	4.04	0.0001430	22.87	0.0134749	0.64	0.0000073	4.04	0.0936339	7.17	0.7717577	0.84	0.0000000	0.00	0.0000136	0.64
	13C2037	700 °C	✓	0.0037886	0.67	0.0000000	0.00	0.0000061	2.68	0.0000000	10.90	0.0230247	2.68	0.0007081	0.67	0.0000000	0.00	0.0004856	0.21	0.0000032	2.68	0.0001871	12.16	0.0426712	0.21	0.0000155	2.68	0.2508751	3.07	1.1195262	0.67	0.0000000	0.00	0.0000431	0.21
	13C2039	800 °C	✓	0.0066937	0.55	0.0000000	0.00	0.0000185	2.19	0.0000001	9.42	0.0699968	2.19	0.0012511	0.55	0.0000000	0.00	0.0015862	0.10	0.0000097	2.19	0.0002907	10.85	0.1393815	0.10	0.0000471	2.19	0.8199830	1.34	1.9779999	0.55	0.0000000	0.00	0.0001408	0.10
	13C2040	900 °C	✓	0.0038458	0.63	0.0000000	0.00	0.0000174	2.19	0.0000000	15.47	0.0659962	2.19	0.0007188	0.63	0.0000000	0.00	0.0015123	0.15	0.0000092	2.19	0.0001437	16.38	0.1328882	0.15	0.0000444	2.19	0.7826154	0.94	1.1364433	0.63	0.0000000	0.00	0.0001342	0.15
	13C2042	1050 °C	✓	0.0020091	1.02	0.0000000	0.00	0.0000225	2.17	0.0000000	11.44	0.0850496	2.17	0.0003755	1.02	0.0000000	0.00	0.0014314	0.14	0.0000118	2.17	0.0001896	12.65	0.1257864	0.14	0.0000572	2.17	0.7493052	0.83	0.5936995	1.02	0.0000000	0.00	0.0001270	0.14
	13C2043	1250 °C	✓	0.0008508	2.77	0.0000000	0.00	0.0000540	2.15	0.0000000	15.61	0.2043967	2.15	0.0001590	2.77	0.0000000	0.00	0.0011978	0.17	0.0000284	2.15	0.0001837	16.51	0.1052569	0.17	0.0001376	2.15	0.6106268	1.15	0.2514073	2.77	0.0000000	0.00	0.0001063	0.17
	13C2045	1400 °C	✓	0.0003198	6.90	0.0000000	0.00	0.0000294	2.16	0.0000000	36.99	0.1113390	2.16	0.0000598	6.90	0.0000000	0.00	0.0004945	0.29	0.0000155	2.16	0.0000570	37.38	0.0434556	0.29	0.0000749	2.16	0.2501011	2.62	0.0944939	6.90	0.0000000	0.00	0.0000439	0.29
		Σ		0.0206873	0.34	0.0000000	0.00	0.0001513	1.01	0.0000003	5.98	0.5729270	1.01	0.0038665	0.34	0.0000000	0.00	0.0068826	0.07	0.0000796	1.01	0.0012112	6.36	0.6048017	0.07	0.0003856	1.01	3.5753063	0.59	6.1130966	0.34	0.0000000	0.00	0.0006108	0.07
	Σ									0.0208388	0.34	0.5729270	1.01								0.0120399	0.65			0.6051872	0.07							9.6890137	0.31	



Additional Parameters			40Ar/39Ar	1σ	37Ar/39Ar	1σ	36Ar/39Ar	1σ	Time (days)	37Ar (decay)	39Ar (decay)	40Ar (moles)
13C2034	500 °C	✓	98.464616	4.308112	1.218162	0.207151	0.300979	0.017359	107.655	8.405336	1.00076078	3.719E-14
13C2036	600 °C	✓	64.188816	0.426326	0.802818	0.032819	0.193929	0.002051	107.690	8.4111103	1.00076103	1.731E-13
13C2037	700 °C	✓	32.104687	0.080945	0.539387	0.014480	0.088896	0.000622	107.707	8.413988	1.00076115	2.741E-13
13C2039	800 °C	✓	20.068506	0.022000	0.502026	0.010994	0.048141	0.000269	107.742	8.419876	1.00076140	5.596E-13
13C2040	900 °C	✓	14.437332	0.024430	0.496464	0.010921	0.029062	0.000186	107.760	8.422764	1.00076152	3.838E-13
13C2042	1050 °C	✓	10.673017	0.018803	0.675835	0.014713	0.016144	0.000164	107.795	8.428658	1.00076177	2.686E-13
13C2043	1250 °C	✓	8.180127	0.015461	1.939349	0.041867	0.008585	0.000224	107.813	8.431664	1.00076190	1.724E-13
13C2045	1400 °C	✓	7.917179	0.027498	2.557724	0.055777	0.008022	0.000507	107.849	8.437681	1.00076216	6.893E-14



Procedure		36Ar		37Ar		38Ar		39Ar		40Ar	
		[V]	1σ	[V]	1σ	[V]	1σ	[V]	1σ	[V]	1σ
13C2034	500 °C	0.0003075	0.0000156	0.0000063	0.0000355	0.0000061	0.0000121	0.0000042	0.0000803	0.0009379	0.0006115
13C2036	600 °C	0.0003080	0.0000156	0.0000126	0.0000355	0.0000040	0.0000121	0.0000162	0.0000803	0.0014946	0.0006115
13C2037	700 °C	0.0003082	0.0000156	0.0000206	0.0000355	0.0000126	0.0000121	0.0000204	0.0000803	0.0017729	0.0006115
13C2039	800 °C	0.0003087	0.0000156	0.0000336	0.0000355	0.0000299	0.0000121	0.0000605	0.0000803	0.0023407	0.0006115
13C2040	900 °C	0.0003089	0.0000156	0.0000385	0.0000355	0.0000335	0.0000121	0.0001027	0.0000803	0.0026191	0.0006115
13C2042	1050 °C	0.0003093	0.0000156	0.0000452	0.0000355	0.0000260	0.0000121	0.0002260	0.0000803	0.0031869	0.0006115
13C2043	1250 °C	0.0003096	0.0000156	0.0000470	0.0000355	0.0000160	0.0000121	0.0002933	0.0000803	0.0034763	0.0006115
13C2045	1400 °C	0.0003101	0.0000156	0.0000472	0.0000355	0.0000043	0.0000121	0.0003700	0.0000803	0.0040553	0.0006115



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Intercept Values		36Ar [V]	1σ	r2		37Ar [V]	1σ	r2		38Ar [V]	1σ	r2		39Ar [V]	1σ	r2		40Ar [V]	1σ	r2		
	13C2034	500 °C	0.0008978	0.0000159	0.4574	LIN #	0.0002752	0.0000290	0.0294	EXP #	0.0001533	0.0000267	0.1034	LIN #	0.0019024	0.0000207	0.9741	EXP #	0.1870989	0.0004586	0.9845	EXP #
	13C2036	600 °C	0.0030238	0.0000168	0.9323	LIN #	0.0013372	0.0000283	0.0012	EXP #	0.0008058	0.0000287	0.0233	LIN #	0.0136350	0.0000326	0.9902	EXP #	0.8683761	0.0014928	0.9930	EXP #
	13C2037	700 °C	0.0042500	0.0000211	0.9532	LIN #	0.0028376	0.0000286	0.5242	EXP #	0.0014246	0.0000125	0.3108	LIN #	0.0431440	0.0000446	0.9563	EXP #	1.3746918	0.0017404	0.9962	EXP #
	13C2039	800 °C	0.0072800	0.0000349	0.9806	LIN # 1 3 7 9	0.0085906	0.0000232	0.9901	EXP # 2 4 7	0.0032308	0.0000181	0.7674	LIN #	0.1409018	0.0001168	0.9978	EXP # 2	2.8052332	0.0010470	0.9997	EXP # 2
	13C2040	900 °C	0.0043215	0.0000196	0.9505	LIN #	0.0081036	0.0000232	0.9849	EXP #	0.0024655	0.0000167	0.6078	LIN #	0.1343824	0.0001785	0.9961	EXP #	1.9250847	0.0015331	0.9983	EXP #
	13C2042	1050 °C	0.0024200	0.0000144	0.8197	LIN #	0.0104326	0.0000254	0.9940	EXP # 4	0.0020751	0.0000147	0.8702	LIN # 6	0.1273578	0.0001533	0.9976	EXP #	1.3487464	0.0013734	0.9971	EXP #
	13C2043	1250 °C	0.0012500	0.0000188	0.0060	LIN #	0.0250041	0.0000638	0.9948	EXP #	0.0016169	0.0000241	0.7135	LIN #	0.1067775	0.0001638	0.9967	EXP #	0.8672645	0.0003136	0.9996	EXP # 1
	13C2045	1400 °C	0.0006733	0.0000168	0.0058	LIN # 5	0.0136309	0.0000318	0.9957	EXP #	0.0006351	0.0000169	0.0528	LIN #	0.0443465	0.0000985	0.9935	EXP # 1	0.3493229	0.0002565	0.9979	EXP # 1



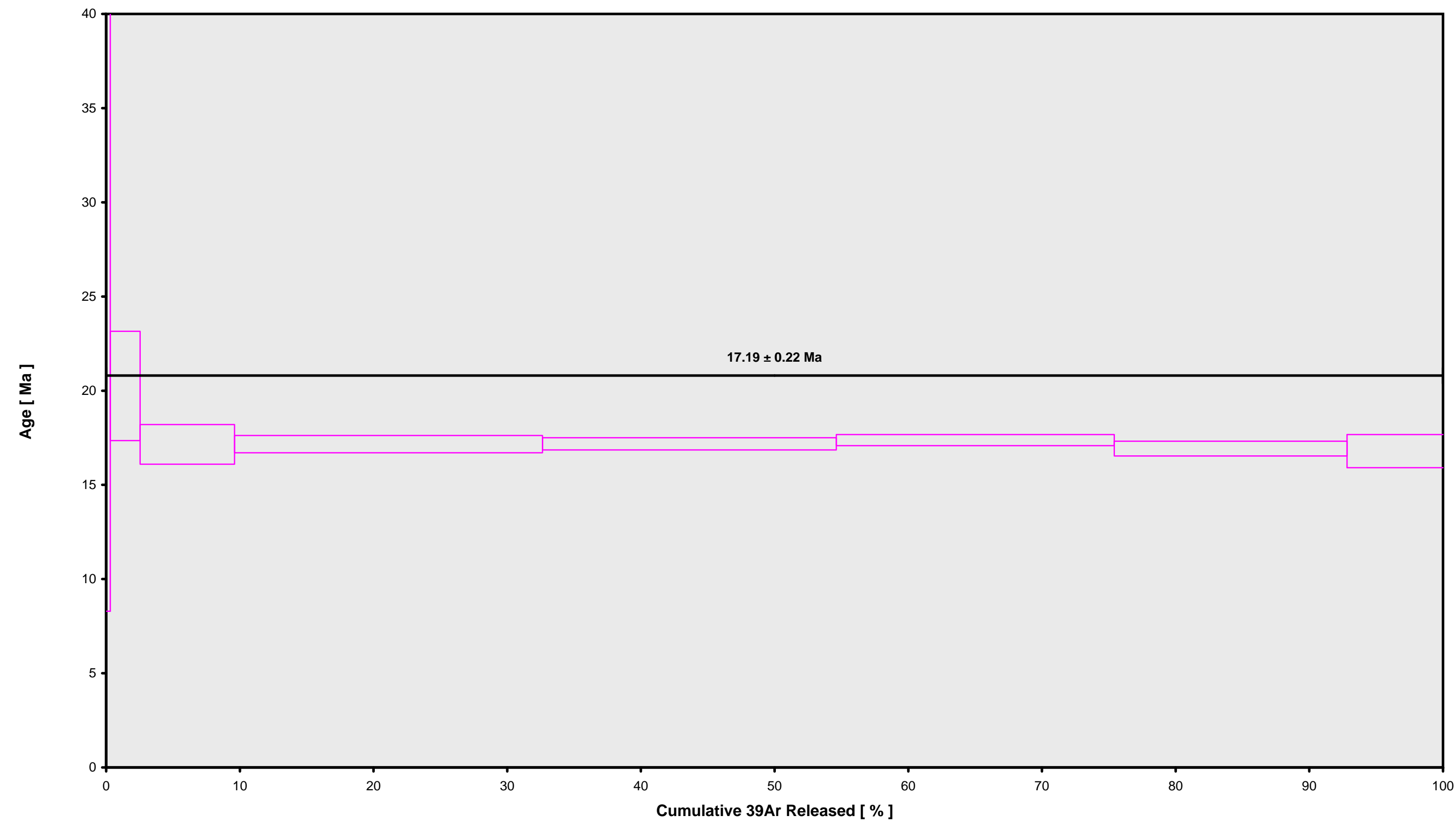
OSU Argon Geochronology Lab																																			
Sample Parameters		Sample	Material	Location	Analyst	Temp	Standard Name	Standard (in Ma)	%1σ	Standard Reference	Standard 40Ar/39Ar	%1σ	J	%1σ	Air 40Ar/36Ar	%1σ	MDF	%1σ	Volume Ratio	Sensitivity (mol/volt)	Day	Month	Year	Hour	Min	Resist	Irradiation	X-pos	Y-pos	Z/H-pos	Project	Experiment	Nmb		
		13C2034	500 °C	189-1	Groundmass	Kerguelen Plateau	Kyle Krawl	500	FCT-3	28.201	0.083	Kuiper et al., 2008			0.00162479	0.249			1.0092	0.001	0.9988	2E-13	22	JUL	2013	7	44	1	OSU2C13	0.00	0.00	29.10	Kerguelen	13C2034	01
		13C2036	600 °C	189-1	Groundmass	Kerguelen Plateau	Kyle Krawl	600	FCT-3	28.201	0.083	Kuiper et al., 2008			0.00162479	0.249			1.0092	0.001	0.9983	2E-13	22	JUL	2013	8	34	1	OSU2C13	0.00	0.00	29.10	Kerguelen	13C2034	01
		13C2037	700 °C	189-1	Groundmass	Kerguelen Plateau	Kyle Krawl	700	FCT-3	28.201	0.083	Kuiper et al., 2008			0.00162479	0.249			1.0092	0.001	0.9982	2E-13	22	JUL	2013	8	59	1	OSU2C13	0.00	0.00	29.10	Kerguelen	13C2034	01
		13C2039	800 °C	189-1	Groundmass	Kerguelen Plateau	Kyle Krawl	800	FCT-3	28.201	0.083	Kuiper et al., 2008			0.00162479	0.249			1.0092	0.001	0.9983	2E-13	22	JUL	2013	9	50	1	OSU2C13	0.00	0.00	29.10	Kerguelen	13C2034	01
		13C2040	900 °C	189-1	Groundmass	Kerguelen Plateau	Kyle Krawl	900	FCT-3	28.201	0.083	Kuiper et al., 2008			0.00162479	0.249			1.0092	0.001	0.9983	2E-13	22	JUL	2013	10	15	1	OSU2C13	0.00	0.00	29.10	Kerguelen	13C2034	01
		13C2042	1050 °C	189-1	Groundmass	Kerguelen Plateau	Trevor Smith	1050	FCT-3	28.201	0.083	Kuiper et al., 2008			0.00162479	0.249			1.0092	0.001	0.9982	2E-13	22	JUL	2013	11	6	1	OSU2C13	0.00	0.00	29.10	Kerguelen	13C2034	01
		13C2043	1250 °C	189-1	Groundmass	Kerguelen Plateau	Trevor Smith	1250	FCT-3	28.201	0.083	Kuiper et al., 2008			0.00162479	0.249			1.0092	0.001	0.9981	2E-13	22	JUL	2013	11	32	1	OSU2C13	0.00	0.00	29.10	Kerguelen	13C2034	01
		13C2045	1400 °C	189-1	Groundmass	Kerguelen Plateau	Trevor Smith	1400	FCT-3	28.201	0.083	Kuiper et al., 2008			0.00162479	0.249			1.0092	0.001	0.9982	2E-13	22	JUL	2013	12	24	1	OSU2C13	0.00	0.00	29.10	Kerguelen	13C2034	01



OSU Argon Geochronology Lab																											
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
	13C2034	500 °C	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0
	13C2036	600 °C	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0
	13C2037	700 °C	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0
	13C2039	800 °C	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0
	13C2040	900 °C	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0
	13C2042	1050 °C	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0
	13C2043	1250 °C	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0
	13C2045	1400 °C	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0



13C2034.AGE >>> 189-1 >>> KERGUELEN PROJECT



Ar-Ages in Ma

WEIGHTED PLATEAU

17.19 ± 0.22

TOTAL FUSION

17.25 ± 0.22

NORMAL ISOCHRON

17.03 ± 0.32

INVERSE ISOCHRON

17.04 ± 0.33

MSWD (PROBABILITY)

1.43 (19%)

Sample Info

Groundmass

Kerguelen Plateau

Kyle Krawl

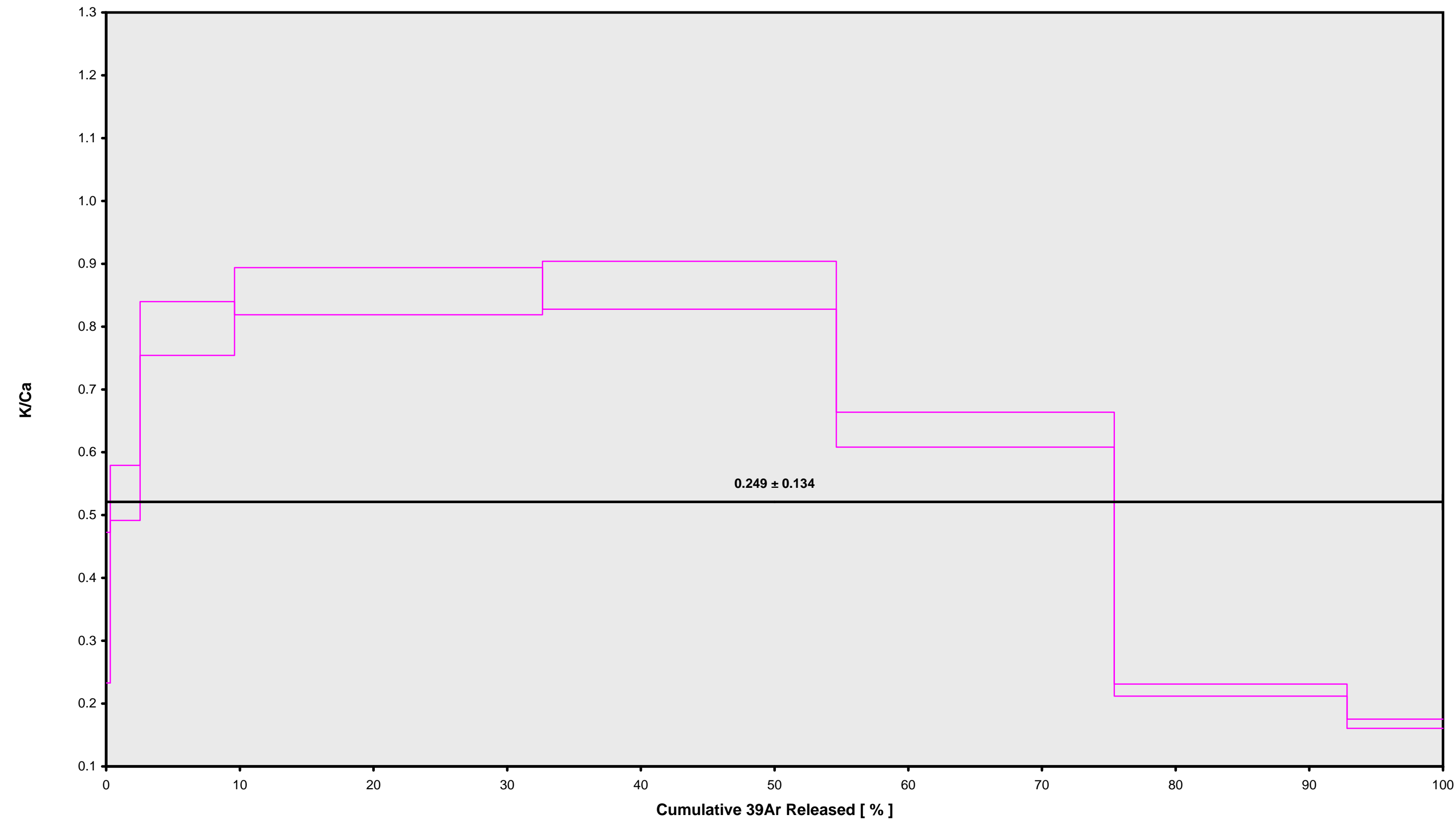
IRR = OSU2C13

J = 0.00162479 ± 0.00000405

RECALIBRATED AGE



13C2034.AGE >>> 189-1 >>> KERGUELEN PROJECT



Ar-Ages in Ma

WEIGHTED PLATEAU

17.19 ± 0.22

TOTAL FUSION

17.25 ± 0.22

NORMAL ISOCHRON

17.03 ± 0.32

INVERSE ISOCHRON

17.04 ± 0.33

Sample Info

Groundmass

Kerguelen Plateau

Kyle Krawl

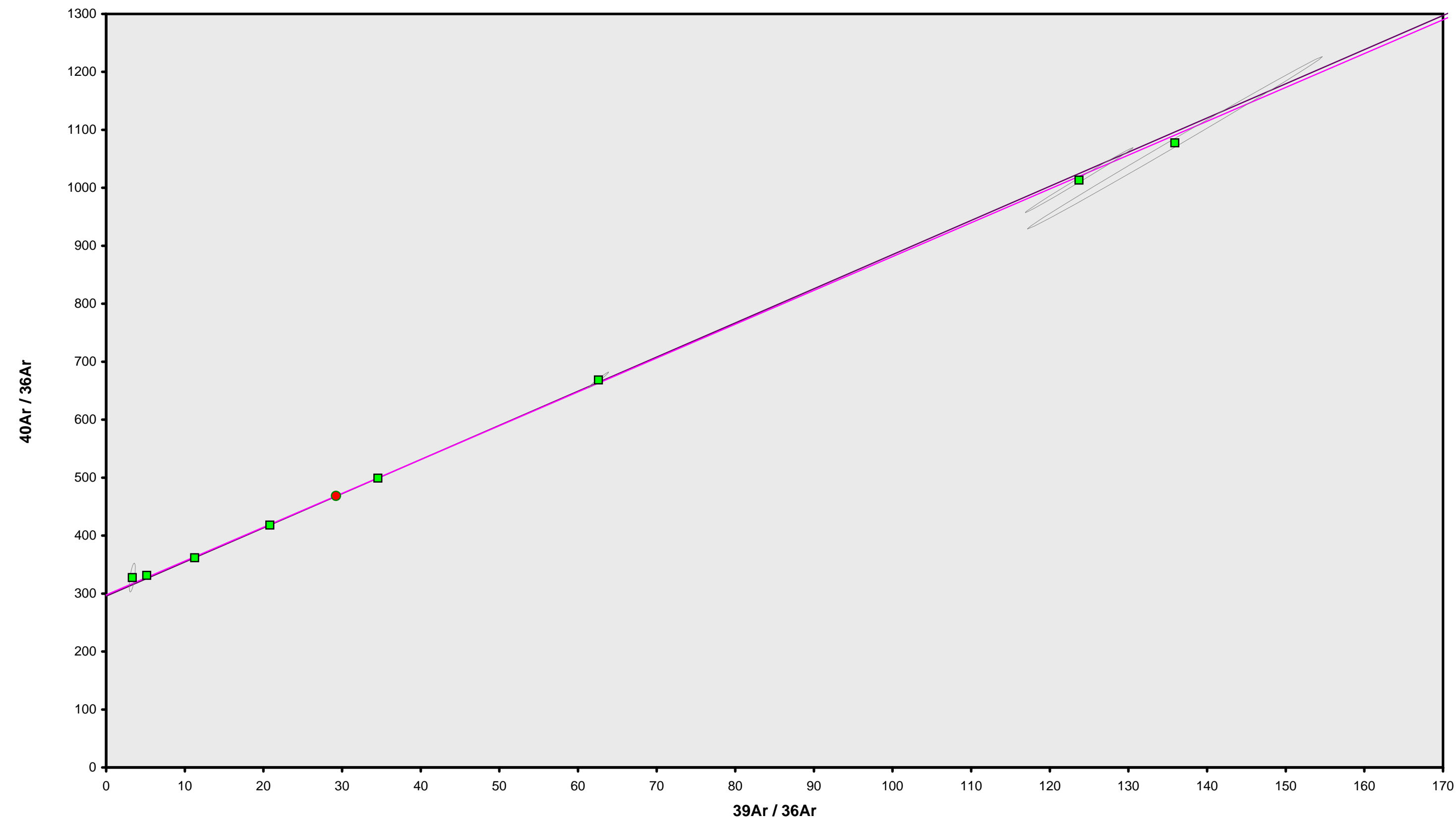
IRR = OSU2C13

J = 0.00162479 ± 0.00000405

RECALIBRATED AGE



13C2034.AGE >>> 189-1 >>> KERGUELEN PROJECT



**Ar-Ages in Ma**

**WEIGHTED PLATEAU**  
17.19 ± 0.22

**TOTAL FUSION**  
17.25 ± 0.22

**NORMAL ISOCHRON**  
17.03 ± 0.32

**INVERSE ISOCHRON**  
17.04 ± 0.33

**MSWD (PROBABILITY)**  
1.29 (26%)

**40AR/36AR INTERCEPT**  
297.7 ± 3.4

**Sample Info**

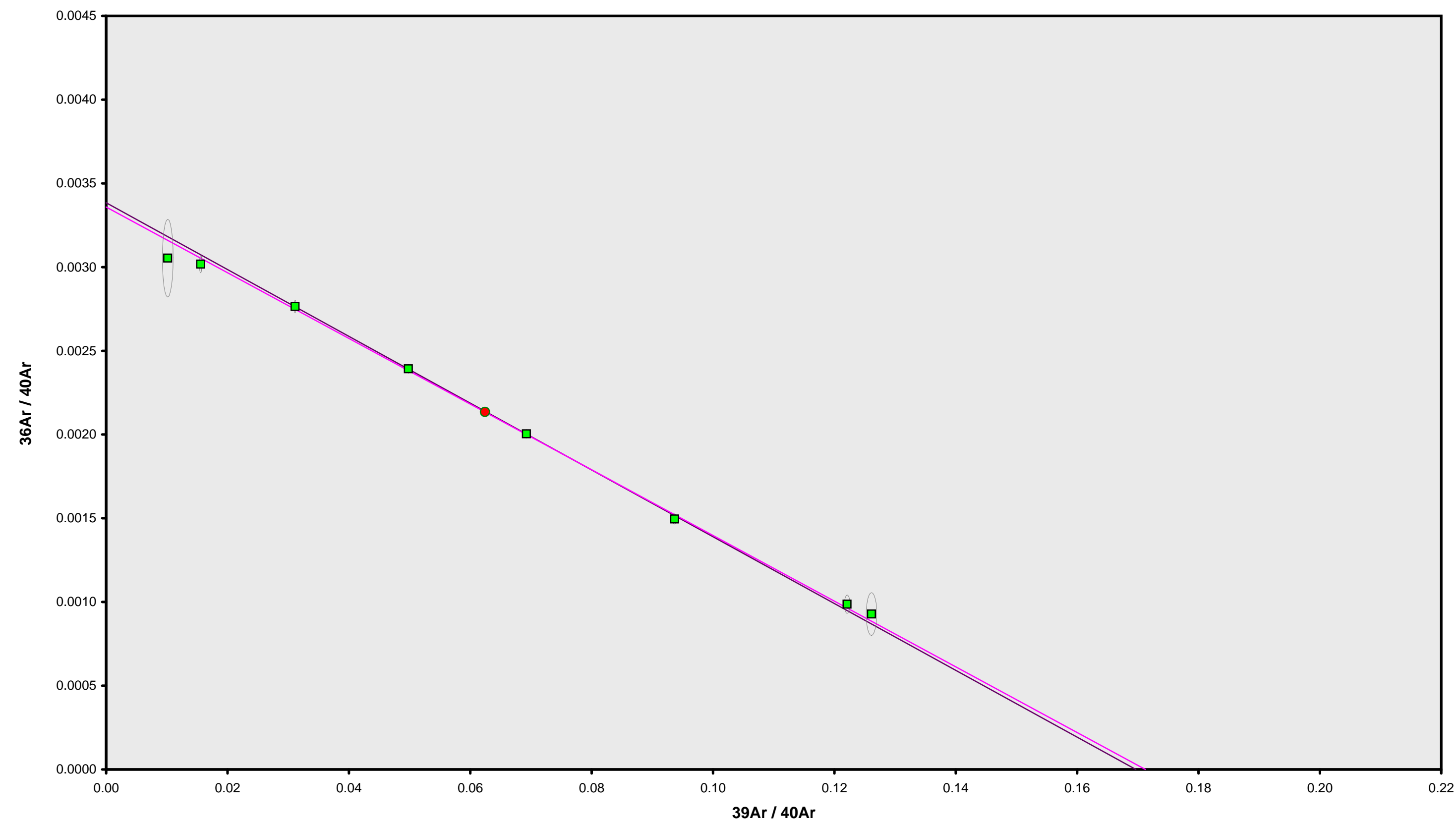
Groundmass  
Kerguelen Plateau  
Kyle Krawl

IRR = OSU2C13  
J = 0.00162479 ± 0.00000405

**RECALIBRATED AGE**



13C2034.AGE >>> 189-1 >>> KERGUELEN PROJECT



**Ar-Ages in Ma**

**WEIGHTED PLATEAU**  
17.19 ± 0.22

**TOTAL FUSION**  
17.25 ± 0.22

**NORMAL ISOCHRON**  
17.03 ± 0.32

**INVERSE ISOCHRON**  
17.04 ± 0.33

**MSWD (PROBABILITY)**  
1.31 (25%)

**SPREADING FACTOR**  
67.7%

**40AR/36AR INTERCEPT**  
297.7 ± 3.5

**Sample Info**

Groundmass  
Kerguelen Plateau  
Kyle Krawl

IRR = OSU2C13  
J = 0.00162479 ± 0.00000405

**RECALIBRATED AGE**



Incremental Heating			36Ar(a) [V]	37Ar(ca) [V]	38Ar(cl) [V]	39Ar(k) [V]	40Ar(r) [V]	Age ± 2σ (Ma)	40Ar(r) (%)	39Ar(k) (%)	K/Ca ± 2σ
13C2021	500 °C	✓	0.0004891	0.0040307	0.0000296	0.0031767	0.0129822	11.86 ± 11.63	8.24	0.62	0.339 ± 0.046
13C2023	600 °C	✓	0.0012819	0.0178387	0.0000310	0.0142174	0.0882548	17.98 ± 2.05	18.90	2.76	0.343 ± 0.017
13C2024	700 °C	✓	0.0007888	0.0275234	0.0000000	0.0246773	0.1604644	18.83 ± 0.90	40.77	4.79	0.386 ± 0.017
13C2026	800 °C	✓	0.0009677	0.0939527	0.0000484	0.0852166	0.5523856	18.77 ± 0.29	65.88	16.54	0.390 ± 0.016
13C2027	900 °C	✓	0.0004619	0.0954396	0.0001588	0.1178286	0.7590267	18.66 ± 0.23	84.75	22.87	0.531 ± 0.022
13C2029	1050 °C	✓	0.0002757	0.0948560	0.0003481	0.1492331	0.9553686	18.54 ± 0.22	92.13	28.97	0.677 ± 0.028
13C2030	1250 °C	✓	0.0002123	0.1179788	0.0003642	0.0890856	0.5597974	18.20 ± 0.25	89.91	17.29	0.325 ± 0.014
13C2032	1400 °C	✓	0.0000900	0.0597947	0.0001455	0.0317086	0.2029086	18.53 ± 0.80	88.40	6.16	0.228 ± 0.010
Σ			0.0045673	0.5114148	0.0011255	0.5151439	3.2911882				

Information on Analysis	Results	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD	39Ar(k) (% ,n)	K/Ca ± 2σ
Sample = 177-1 Material = Groundmass Location = Kerguelen Plateau Analyst = Trevor Smith Project = KERGUELEN Mass Discrimination Law = LIN Irradiation = OSU2C13 J = 0.00161369 ± 0.00000405 FCT-3 = 28.201 ± 0.023 Ma	Age Plateau	6.40104	± 0.05619	1.84	100.00	
	Recalibrated		± 0.88%	18.54	8	0.336 ± 0.083
				Full External Error ± 0.46	2.07	2σ Confidence Limit
				Analytical Error ± 0.16	1.3583	Error Magnification
	Total Fusion Age	6.38887	± 0.05337			
	Recalibrated		± 0.84%	18.50	8	0.433 ± 0.008
				Full External Error ± 0.45		
				Analytical Error ± 0.15		



Normal Isochron			39(k)/36(a) ± 2σ	40(a+r)/36(a) ± 2σ	r.i.
13C2021	500 °C	✓	6.50 ± 0.61	322.04 ± 28.45	0.9383
13C2023	600 °C	✓	11.09 ± 0.31	364.35 ± 9.71	0.9547
13C2024	700 °C	✓	31.29 ± 1.04	498.94 ± 16.43	0.9877
13C2026	800 °C	✓	88.06 ± 2.55	866.33 ± 25.09	0.9939
13C2027	900 °C	✓	255.07 ± 16.69	1938.61 ± 126.83	0.9990
13C2029	1050 °C	✓	541.38 ± 74.81	3761.31 ± 519.75	0.9998
13C2030	1250 °C	✓	419.57 ± 51.31	2931.97 ± 358.51	0.9998
13C2032	1400 °C	✓	352.34 ± 115.14	2550.21 ± 833.25	0.9998

Results	40(a)/36(a) ± 2σ		40(r)/39(k) ± 2σ		Age ± 2σ (Ma)	MSWD	
Normal Isochron	298.14	± 8.92	6.37295	± 0.07728	18.46	± 0.24	2.37
Error Chron		± 2.99%		± 1.21%		± 1.31%	3%
					Full External Error ± 0.48		
					Analytical Error ± 0.22		
Statistics	2σ Confidence Limit	2.15	Convergence		0.000000062903		
	Error Magnification	1.5411	Number of Iterations		459		
	Number of Data Points	8	Calculated Line		Weighted York-2		



Inverse Isochron			39(k)/40(a+r) ± 2σ	36(a)/40(a+r) ± 2σ	r.i.
13C2021	500 °C	✓	0.0201691 ± 0.0006548	0.00310516 ± 0.00027436	0.0075
13C2023	600 °C	✓	0.0304412 ± 0.0002517	0.00274462 ± 0.00007316	0.0148
13C2024	700 °C	✓	0.0627055 ± 0.0003262	0.00200425 ± 0.00006600	0.0066
13C2026	800 °C	✓	0.1016496 ± 0.0003251	0.00115429 ± 0.00003343	0.0472
13C2027	900 °C	✓	0.1315739 ± 0.0003857	0.00051583 ± 0.00003375	0.0140
13C2029	1050 °C	✓	0.1439328 ± 0.0003974	0.00026587 ± 0.00003674	0.0065
13C2030	1250 °C	✓	0.1431002 ± 0.0003407	0.00034107 ± 0.00004170	0.0059
13C2032	1400 °C	✓	0.1381631 ± 0.0008261	0.00039212 ± 0.00012812	0.0014

Results	40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD
Inverse Isochron Recalibrated	297.78 ± 8.35 ± 2.80%	6.38968 ± 0.07287 ± 1.14%	18.51 ± 0.23 ± 1.24%	2.05 6%
			Full External Error ± 0.48 Analytical Error ± 0.21	
Statistics	2σ Confidence Limit Error Magnification Number of Data Points Spreading Factor	2.15 1.4311 8 79.1%	Convergence Number of Iterations Calculated Line	0.0000000009 4 Weighted York-2



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Relative Abundances			40Ar		39Ar		38Ar		37Ar		36Ar		40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	40Ar(r) (%)	39Ar(k) (%)	K/Ca ± 2σ
			[V]	1σ	[V]	1σ	[V]	1σ	[V]	1σ	[V]	1σ					
13C2021	500 °C	✓	0.1575064	0.0003643	0.0031794	0.0000510	0.0001577	0.0000167	0.0040307	0.0002643	0.0004901	0.0000216	4.08669 ± 4.02287	11.86 ± 11.63	8.24	0.62	0.339 ± 0.046
13C2023	600 °C	✓	0.4670580	0.0004217	0.0142294	0.0000574	0.0004349	0.0000194	0.0178387	0.0004280	0.0012866	0.0000170	6.20754 ± 0.71275	17.98 ± 2.05	18.90	2.76	0.343 ± 0.017
13C2024	700 °C	✓	0.3935675	0.0002092	0.0246958	0.0000628	0.0004098	0.0000195	0.0275234	0.0006027	0.0007960	0.0000130	6.50251 ± 0.31306	18.83 ± 0.90	40.77	4.79	0.386 ± 0.017
13C2026	800 °C	✓	0.8384225	0.0008766	0.0852798	0.0001031	0.0012121	0.0000248	0.0939527	0.0019700	0.0009925	0.0000140	6.48214 ± 0.10032	18.77 ± 0.29	65.88	16.54	0.390 ± 0.016
13C2027	900 °C	✓	0.8956509	0.0007342	0.1178928	0.0001431	0.0015993	0.0000259	0.0954396	0.0019929	0.0004872	0.0000151	6.44179 ± 0.07837	18.66 ± 0.23	84.75	22.87	0.531 ± 0.022
13C2029	1050 °C	✓	1.0369755	0.0008176	0.1492969	0.0001691	0.0021111	0.0000213	0.0948560	0.0019841	0.0003008	0.0000190	6.40185 ± 0.07758	18.54 ± 0.22	92.13	28.97	0.677 ± 0.028
13C2030	1250 °C	✓	0.6226303	0.0004086	0.0891650	0.0000885	0.0014340	0.0000243	0.1179788	0.0024901	0.0002435	0.0000130	6.28381 ± 0.08750	18.20 ± 0.25	89.91	17.29	0.325 ± 0.014
13C2032	1400 °C	✓	0.2295336	0.0001919	0.0317489	0.0000910	0.0005314	0.0000213	0.0597947	0.0012603	0.0001058	0.0000147	6.39916 ± 0.27674	18.53 ± 0.80	88.40	6.16	0.228 ± 0.010

Σ			4.6413448	0.0015919	0.5154880	0.0002927	0.0078903	0.0000618	0.5114148	0.0044939	0.0047025	0.0000458				
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Information on Analysis and Constants Used in Calculations		Results						
		40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD	39Ar(k) (%.n)	K/Ca ± 2σ	
Sample = 177-1	Age Equations = Min et al. (2000)							
Material = Groundmass	Negative Intensities = Allowed							
Location = Kerguelen Plateau	Decay Constant 40K = 5.543 ± 0.044 E-10 1/a							
Analyst = Trevor Smith	Decay Constant 39Ar = 2.940 ± 0.029 E-07 1/h							
Project = KERGUELEN	Decay Constant 37Ar = 8.230 ± 0.082 E-04 1/h							
Mass Discrimination Law = LIN	Decay Constant 36Cl = 2.236 ± 0.045 E-06 1/a							
Irradiation = OSU2C13	Decay Constant 40K(EC,β <sup>+</sup> ) = 0.580 ± 0.009 E-10 1/a							
J = 0.00161369 ± 0.00000405	Decay Constant 40K(β <sup>-</sup> ) = 4.950 ± 0.043 E-10 1/a							
FCT-3 = 28.201 ± 0.023 Ma	Atmospheric Ratio 40/36(a) = 295.50							
IGSN = Undefined	Atmospheric Ratio 38/36(a) = 0.1869							
Preferred Age = Undefined	Production Ratio 39/37(ca) = 0.000673							
Classification = Undefined	Production Ratio 38/37(ca) = 0.000139							
Experiment Type = Undefined	Production Ratio 36/37(ca) = 0.000264							
Extraction Method = Undefined	Production Ratio 40/39(k) = 0.001010							
Heating = 0 sec	Production Ratio 38/39(k) = 0.011380							
Isolation = 15.00 min	Production Ratio 36/38(cl) = 316.00 ± 15.80							
Instrument = MAP215-50	Scaling Ratio K/Ca = 0.430							
Lithology = Undefined	Abundance Ratio 40K/K = 1.1700 ± 0.0199 E-04							
Lat-Lon = Undefined - Undefined	Atomic Weight K = 39.0983 ± 0.0001 g							
R1 ratio = Undefined	Recalibrated to FCT-3 Secondary Standard							
R2 ratio = Undefined	Standard Age = 28.201 ± 0.023 Ma							
R3 ratio = Undefined								
R4 ratio = Undefined								
R5 ratio = Undefined								
Collector Calibrations =								



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Degassing Patterns			36Ar(a) [V]	%1σ	36Ar(c) [V]	%1σ	36Ar(ca) [V]	%1σ	36Ar(cl) [V]	%1σ	37Ar(ca) [V]	%1σ	38Ar(a) [V]	%1σ	38Ar(c) [V]	%1σ	38Ar(k) [V]	%1σ	38Ar(ca) [V]	%1σ	38Ar(cl) [V]	%1σ	39Ar(k) [V]	%1σ	39Ar(ca) [V]	%1σ	40Ar(r) [V]	%1σ	40Ar(a) [V]	%1σ	40Ar(c) [V]	%1σ	40Ar(k) [V]	%1σ	
	13C2021	500 °C	✓	0.0004891	4.41	0.0000000	0.00	0.0000011	6.56	0.0000000	58.54	0.0040307	6.56	0.0000914	4.41	0.0000000	0.00	0.0000362	1.61	0.0000006	6.56	0.0000296	58.79	0.0031767	1.61	0.0000027	6.56	0.0129822	49.19	0.1445210	4.41	0.0000000	0.00	0.0000032	1.61
	13C2023	600 °C	✓	0.0012819	1.33	0.0000000	0.00	0.0000047	2.40	0.0000000	63.56	0.0178387	2.40	0.0002396	1.33	0.0000000	0.00	0.0001618	0.40	0.0000025	2.40	0.0000310	63.79	0.0142174	0.40	0.0000120	2.40	0.0882548	5.73	0.3787888	1.33	0.0000000	0.00	0.0000144	0.40
	13C2024	700 °C	✓	0.0007888	1.65	0.0000000	0.00	0.0000073	2.19	0.0000000	0.00	0.0275234	2.19	0.0001474	1.65	0.0000000	0.00	0.0002808	0.25	0.0000038	2.19	0.0000000	0.00	0.0246773	0.25	0.0000185	2.19	0.1604644	2.39	0.2330783	1.65	0.0000000	0.00	0.0000249	0.25
	13C2026	800 °C	✓	0.0009677	1.44	0.0000000	0.00	0.0000248	2.10	0.0000000	51.88	0.0939527	2.10	0.0001809	1.44	0.0000000	0.00	0.0009698	0.12	0.0000131	2.10	0.0000484	52.16	0.0852166	0.12	0.0000632	2.10	0.5523856	0.76	0.2859509	1.44	0.0000000	0.00	0.0000861	0.12
	13C2027	900 °C	✓	0.0004619	3.27	0.0000000	0.00	0.0000252	2.09	0.0000000	17.27	0.0954396	2.09	0.0000863	3.27	0.0000000	0.00	0.0013409	0.12	0.0000133	2.09	0.0001588	18.09	0.1178286	0.12	0.0000642	2.09	0.7590267	0.60	0.1365052	3.27	0.0000000	0.00	0.0001190	0.12
	13C2029	1050 °C	✓	0.0002757	6.91	0.0000000	0.00	0.0000250	2.09	0.0000001	8.24	0.0948560	2.09	0.0000515	6.91	0.0000000	0.00	0.0016983	0.11	0.0000132	2.09	0.0003481	9.85	0.1492331	0.11	0.0000638	2.09	0.9553686	0.60	0.0814562	6.91	0.0000000	0.00	0.0001507	0.11
	13C2030	1250 °C	✓	0.0002123	6.11	0.0000000	0.00	0.0000311	2.11	0.0000001	8.61	0.1179788	2.11	0.0000397	6.11	0.0000000	0.00	0.0010138	0.10	0.0000164	2.11	0.0003642	10.16	0.0890856	0.10	0.0000794	2.11	0.5597974	0.69	0.0627430	6.11	0.0000000	0.00	0.0000900	0.10
	13C2032	1400 °C	✓	0.0000900	16.34	0.0000000	0.00	0.0000158	2.11	0.0000000	15.72	0.0597947	2.11	0.0000168	16.34	0.0000000	0.00	0.0003608	0.29	0.0000083	2.11	0.0001455	16.61	0.0317086	0.29	0.0000402	2.11	0.2029086	2.14	0.0265930	16.34	0.0000000	0.00	0.0000320	0.29
		Σ		0.0045673	1.00	0.0000000	0.00	0.0001350	0.88	0.0000002	5.89	0.5114148	0.88	0.0008536	1.00	0.0000000	0.00	0.0058623	0.06	0.0000711	0.88	0.0011255	6.46	0.5151439	0.06	0.0003442	0.88	3.2911882	0.41	1.3496363	1.00	0.0000000	0.00	0.0005203	0.06
		Σ									0.0047025	0.97	0.5114148	0.88								0.0079126	0.93			0.5154880	0.06							4.6413448	0.41



Additional Parameters			40Ar/39Ar	1σ	37Ar/39Ar	1σ	36Ar/39Ar	1σ	Time (days)	37Ar (decay)	39Ar (decay)	40Ar (moles)
13C2021	500 °C	✓	49.539443	0.803515	1.267761	0.085573	0.154161	0.007224	104.922	7.963684	1.00074149	3.150E-14
13C2023	600 °C	✓	32.823552	0.135608	1.253657	0.030498	0.090417	0.001252	104.959	7.969476	1.00074175	9.341E-14
13C2024	700 °C	✓	15.936607	0.041417	1.114498	0.024570	0.032233	0.000532	104.977	7.972318	1.00074188	7.871E-14
13C2026	800 °C	✓	9.831431	0.015713	1.101700	0.023139	0.011638	0.000164	105.012	7.977897	1.00074213	1.677E-13
13C2027	900 °C	✓	7.597163	0.011129	0.809546	0.016933	0.004132	0.000128	105.030	7.980634	1.00074225	1.791E-13
13C2029	1050 °C	✓	6.945726	0.009584	0.635351	0.013309	0.002015	0.000128	105.067	7.986547	1.00074251	2.074E-13
13C2030	1250 °C	✓	6.982899	0.008306	1.323151	0.027958	0.002731	0.000145	105.089	7.989944	1.00074266	1.245E-13
13C2032	1400 °C	✓	7.229659	0.021588	1.883365	0.040060	0.003333	0.000463	105.126	7.995864	1.00074293	4.591E-14



Procedure Blanks		36Ar [V]	1σ	37Ar [V]	1σ	38Ar [V]	1σ	39Ar [V]	1σ	40Ar [V]	1σ
13C2021	500 °C	0.0003101	0.0000114	0.0000073	0.0000164	0.0000160	0.0000143	0.0000351	0.0000498	0.0017627	0.0000667
13C2023	600 °C	0.0003099	0.0000114	0.0000145	0.0000164	0.0000166	0.0000143	0.0000386	0.0000498	0.0017888	0.0000667
13C2024	700 °C	0.0003101	0.0000114	0.0000180	0.0000164	0.0000169	0.0000143	0.0000403	0.0000498	0.0018386	0.0000667
13C2026	800 °C	0.0003112	0.0000114	0.0000250	0.0000164	0.0000175	0.0000143	0.0000436	0.0000498	0.0020855	0.0000667
13C2027	900 °C	0.0003120	0.0000114	0.0000284	0.0000164	0.0000178	0.0000143	0.0000452	0.0000498	0.0022900	0.0000667
13C2029	1050 °C	0.0003145	0.0000114	0.0000357	0.0000164	0.0000184	0.0000143	0.0000487	0.0000498	0.0028969	0.0000667
13C2030	1250 °C	0.0003164	0.0000114	0.0000399	0.0000164	0.0000188	0.0000143	0.0000508	0.0000498	0.0033063	0.0000667
13C2032	1400 °C	0.0003203	0.0000114	0.0000473	0.0000164	0.0000194	0.0000143	0.0000543	0.0000498	0.0039703	0.0000667



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Intercept Values		36Ar [V]	1σ	r2		37Ar [V]	1σ	r2		38Ar [V]	1σ	r2		39Ar [V]	1σ	r2		40Ar [V]	1σ	r2
13C2021	500 °C	0.0008198	0.0000193	0.3013	LIN #	0.0005284	0.0000279	0.1216	EXP #	0.0001769	0.0000093	0.7408	LIN # 6	0.0032475	0.0000132	0.9949	EXP #	0.1595722	0.0003589	0.8952
13C2023	600 °C	0.0016469	0.0000135	0.8381	LIN #	0.0023190	0.0000223	0.8412	EXP #	0.0004604	0.0000137	0.0410	LIN #	0.0144153	0.0000296	0.8788	EXP # 5	0.4697393	0.0004172	0.9977
13C2024	700 °C	0.0011375	0.0000071	0.9262	LIN # 1 5 7 9	0.0035720	0.0000185	0.9664	EXP #	0.0004350	0.0000138	0.3931	LIN #	0.0249893	0.0000393	0.9900	EXP # 1	0.3961191	0.0001987	0.9994
13C2026	800 °C	0.0013426	0.0000089	0.7081	EXP # 2 5 7	0.0121480	0.0000311	0.9930	LIN #	0.0012541	0.0000209	0.1459	LIN #	0.0861978	0.0000914	0.9983	EXP # 7 10	0.8420237	0.0008756	0.9973
13C2027	900 °C	0.0008187	0.0000107	0.7402	LIN #	0.0123403	0.0000208	0.9970	EXP #	0.0016496	0.0000222	0.6067	LIN #	0.1191587	0.0001357	0.9988	EXP # 3 5	0.8996502	0.0007325	0.9976
13C2029	1050 °C	0.0006275	0.0000161	0.6894	LIN #	0.0122621	0.0000245	0.9957	EXP #	0.0021723	0.0000164	0.8328	LIN #	0.1508763	0.0001634	0.9985	EXP # 9	1.0417475	0.0008163	0.9984
13C2030	1250 °C	0.0005699	0.0000071	0.8462	EXP # 6 7	0.0152402	0.0000536	0.9929	EXP # 2 6	0.0014819	0.0000203	0.7231	LIN #	0.0901300	0.0000742	0.9994	EXP # 2 5 11	0.6270653	0.0004038	0.9991
13C2032	1400 °C	0.0004308	0.0000101	0.6932	LIN #	0.0077463	0.0000210	0.9942	EXP #	0.0005617	0.0000163	0.2655	LIN #	0.0321320	0.0000773	0.9915	EXP # 4	0.2339484	0.0001802	0.9958



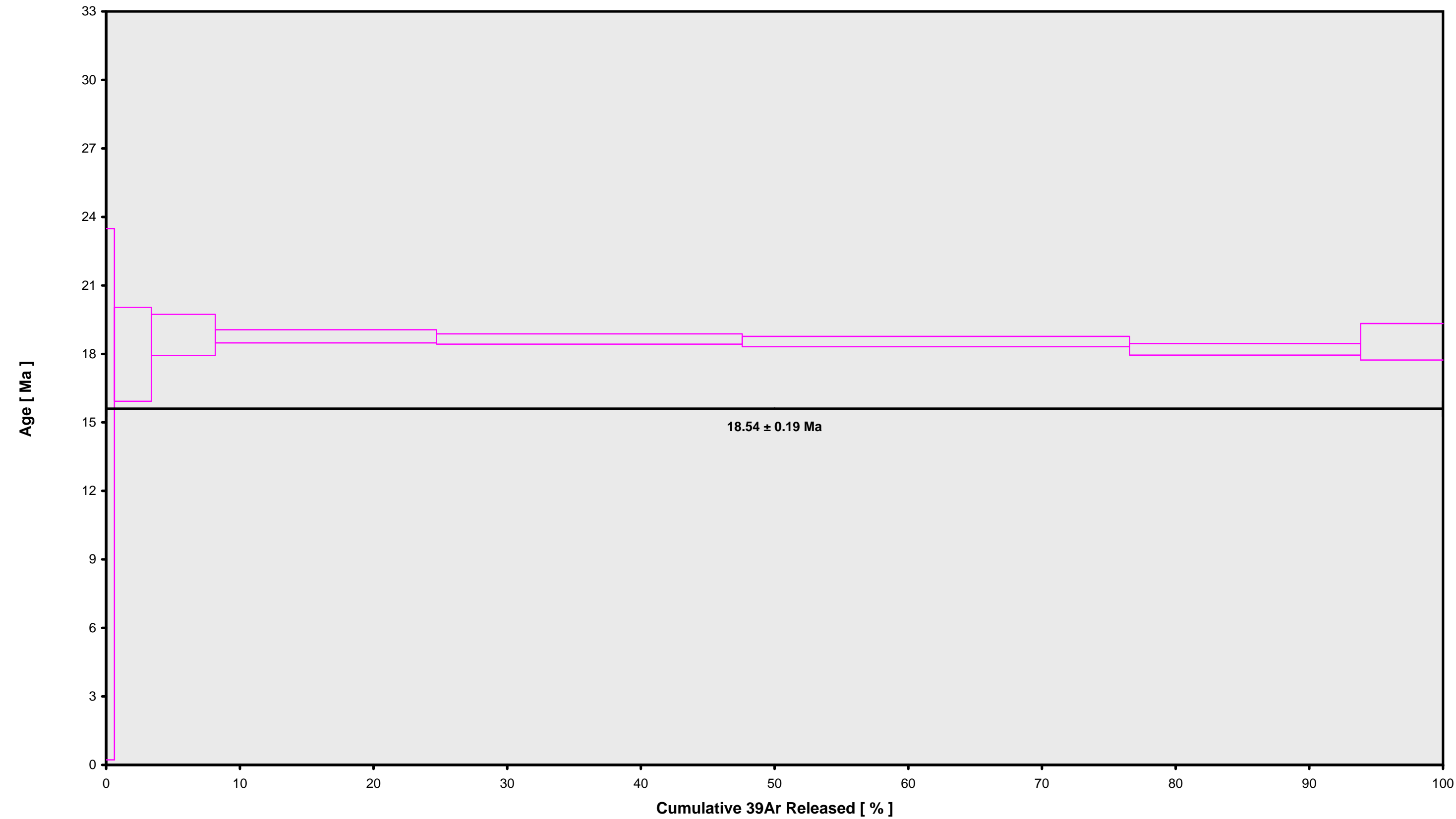
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Sample Parameters		Sample	Material	Location	Analyst	Temp	Standard Name	Standard (in Ma)	%1σ	Standard Reference	Standard 40Ar/39Ar	%1σ	J	%1σ	Air 40Ar/36Ar	%1σ	MDF	%1σ	Volume Ratio	Sensitivity (mol/volt)	Day	Month	Year	Hour	Min	Resist	Irradiation	X-pos	Y-pos	Z/H-pos	Project	Experiment	Nmb		
		13C2021	500 °C	177-1	Groundmass	Kerguelen Plateau	Trevor Smith	500	FCT-3	28.201	0.083	Kuiper et al., 2008			0.00161369	0.251			1.0092	0.001	0.9981	2E-13	19	JUL	2013	14	9	1	OSU2C13	0.00	0.00	31.80	Kerguelen	13C2021	01
		13C2023	600 °C	177-1	Groundmass	Kerguelen Plateau	Trevor Smith	600	FCT-3	28.201	0.083	Kuiper et al., 2008			0.00161369	0.251			1.0092	0.001	0.9981	2E-13	19	JUL	2013	15	2	1	OSU2C13	0.00	0.00	31.80	Kerguelen	13C2021	01
		13C2024	700 °C	177-1	Groundmass	Kerguelen Plateau	Trevor Smith	700	FCT-3	28.201	0.083	Kuiper et al., 2008			0.00161369	0.251			1.0092	0.001	0.9982	2E-13	19	JUL	2013	15	28	1	OSU2C13	0.00	0.00	31.80	Kerguelen	13C2021	01
		13C2026	800 °C	177-1	Groundmass	Kerguelen Plateau	Trevor Smith	800	FCT-3	28.201	0.083	Kuiper et al., 2008			0.00161369	0.251			1.0092	0.001	0.9982	2E-13	19	JUL	2013	16	19	1	OSU2C13	0.00	0.00	31.80	Kerguelen	13C2021	01
		13C2027	900 °C	177-1	Groundmass	Kerguelen Plateau	Trevor Smith	900	FCT-3	28.201	0.083	Kuiper et al., 2008			0.00161369	0.251			1.0092	0.001	0.9981	2E-13	19	JUL	2013	16	44	1	OSU2C13	0.00	0.00	31.80	Kerguelen	13C2021	01
		13C2029	1050 °C	177-1	Groundmass	Kerguelen Plateau	Trevor Smith	1050	FCT-3	28.201	0.083	Kuiper et al., 2008			0.00161369	0.251			1.0092	0.001	0.9982	2E-13	19	JUL	2013	17	38	1	OSU2C13	0.00	0.00	31.80	Kerguelen	13C2021	01
		13C2030	1250 °C	177-1	Groundmass	Kerguelen Plateau	Trevor Smith	1250	FCT-3	28.201	0.083	Kuiper et al., 2008			0.00161369	0.251			1.0092	0.001	0.9982	2E-13	19	JUL	2013	18	9	1	OSU2C13	0.00	0.00	31.80	Kerguelen	13C2021	01
		13C2032	1400 °C	177-1	Groundmass	Kerguelen Plateau	Trevor Smith	1400	FCT-3	28.201	0.083	Kuiper et al., 2008			0.00161369	0.251			1.0092	0.001	0.9981	2E-13	19	JUL	2013	19	3	1	OSU2C13	0.00	0.00	31.80	Kerguelen	13C2021	01



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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	
	13C2021	500 °C	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
	13C2023	600 °C	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
	13C2024	700 °C	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
	13C2026	800 °C	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
	13C2027	900 °C	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
	13C2029	1050 °C	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
	13C2030	1250 °C	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0
	13C2032	1400 °C	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0



13C2021.AGE >>> 177-1 >>> KERGUELEN PROJECT



Ar-Ages in Ma

WEIGHTED PLATEAU

$18.54 \pm 0.19$

TOTAL FUSION

$18.50 \pm 0.18$

NORMAL ISOCHRON

$18.46 \pm 0.24$

INVERSE ISOCHRON

$18.51 \pm 0.23$

MSWD (PROBABILITY)

1.84 (7%)

Sample Info

Groundmass

Kerguelen Plateau

Trevor Smith

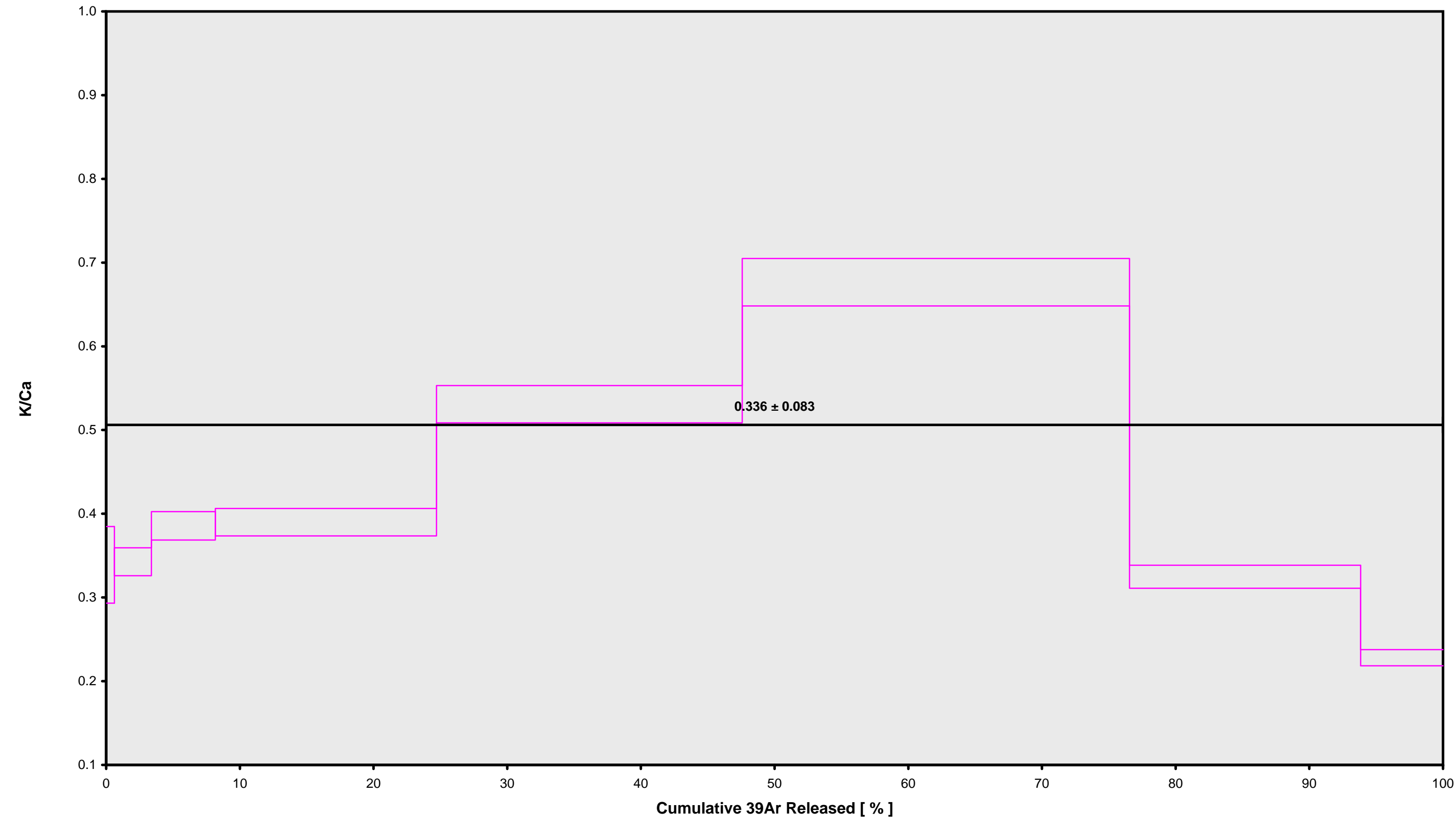
IRR = OSU2C13

J =  $0.00161369 \pm 0.00000405$

RECALIBRATED AGE



13C2021.AGE >>> 177-1 >>> KERGUELEN PROJECT



Ar-Ages in Ma

WEIGHTED PLATEAU

$18.54 \pm 0.19$

TOTAL FUSION

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$18.51 \pm 0.23$

Sample Info

Groundmass

Kerguelen Plateau

Trevor Smith

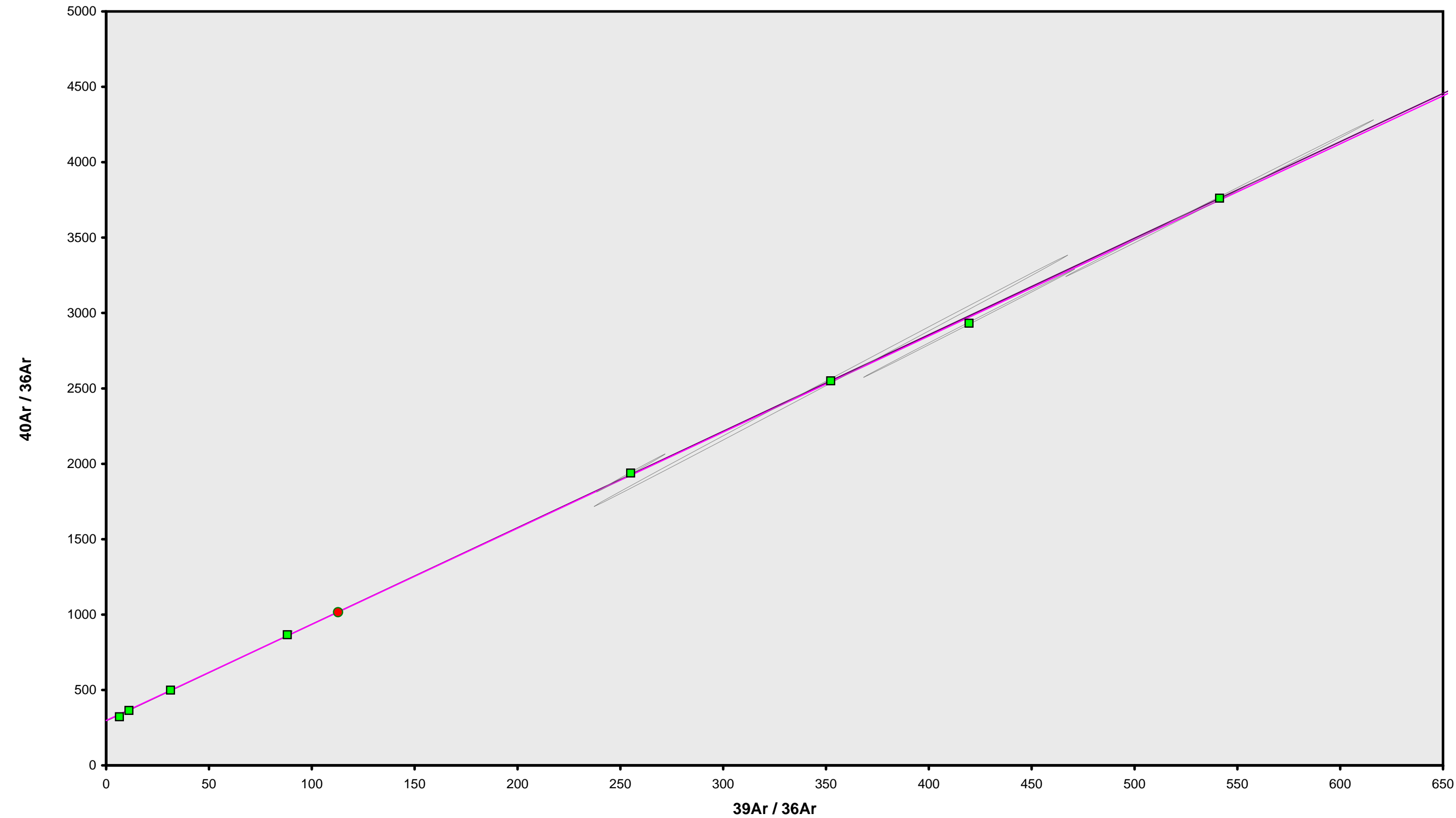
IRR = OSU2C13

J =  $0.00161369 \pm 0.00000405$

RECALIBRATED AGE



13C2021.AGE >>> 177-1 >>> KERGUELEN PROJECT



Ar-Ages in Ma

WEIGHTED PLATEAU

18.54 ± 0.19

TOTAL FUSION

18.50 ± 0.18

NORMAL ISOCHRON

18.46 ± 0.24

INVERSE ISOCHRON

18.51 ± 0.23

MSWD (PROBABILITY)

2.37 (3%)

40AR/36AR INTERCEPT

298.1 ± 8.9

Sample Info

Groundmass

Kerguelen Plateau

Trevor Smith

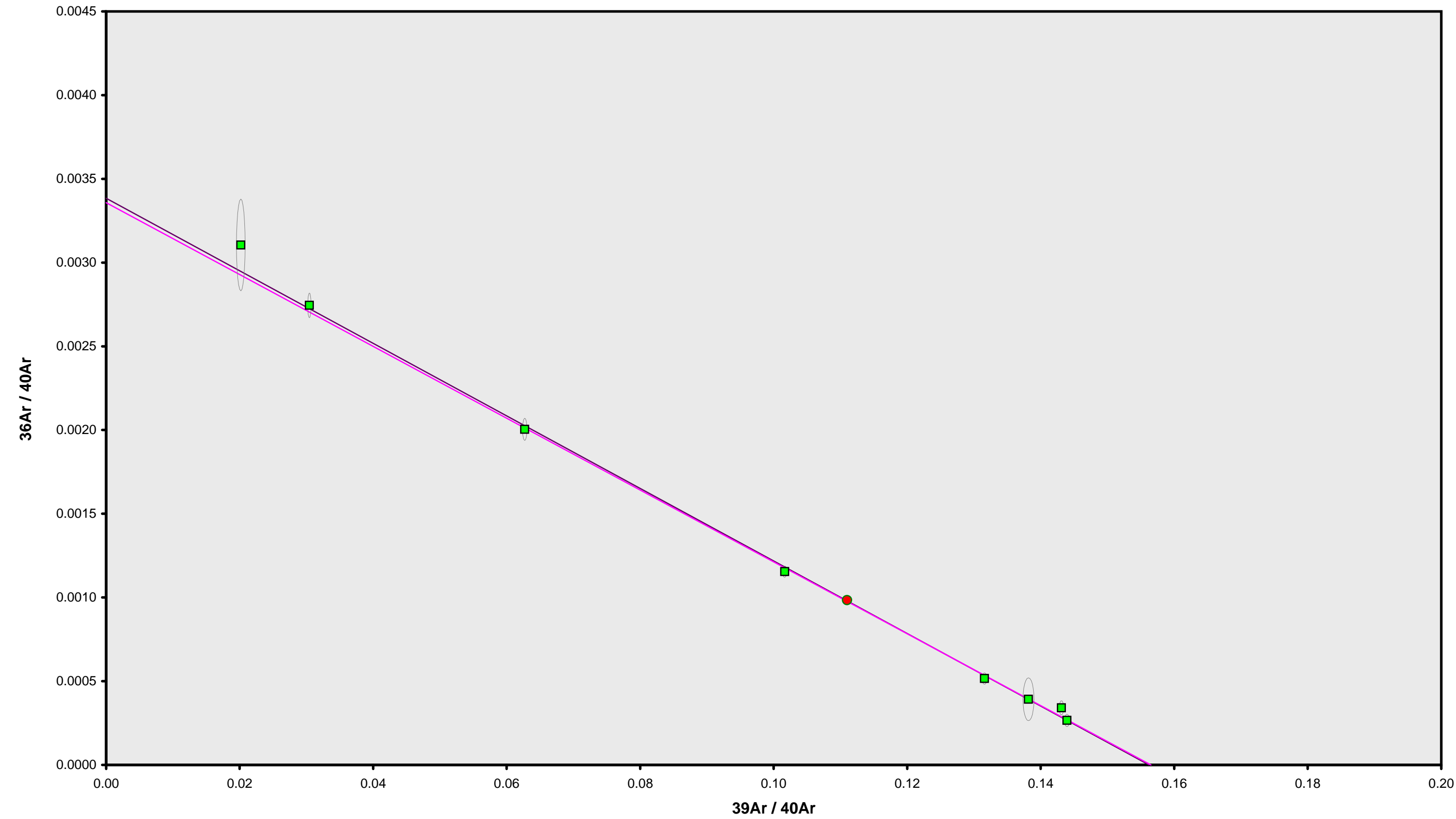
IRR = OSU2C13

J = 0.00161369 ± 0.00000405

RECALIBRATED AGE



13C2021.AGE >>> 177-1 >>> KERGUELEN PROJECT



Ar-Ages in Ma

WEIGHTED PLATEAU

18.54 ± 0.19

TOTAL FUSION

18.50 ± 0.18

NORMAL ISOCHRON

18.46 ± 0.24

INVERSE ISOCHRON

18.51 ± 0.23

MSWD (PROBABILITY)

2.05 (6%)

SPREADING FACTOR

79.1%

40AR/36AR INTERCEPT

297.8 ± 8.3

Sample Info

Groundmass

Kerguelen Plateau

Trevor Smith

IRR = OSU2C13

J = 0.00161369 ± 0.00000405

RECALIBRATED AGE



Incremental Heating		36Ar(a) [V]	37Ar(ca) [V]	38Ar(cl) [V]	39Ar(k) [V]	40Ar(r) [V]	Age ± 2σ (Ma)	40Ar(r) (%)	39Ar(k) (%)	K/Ca ± 2σ
13C1999	500 °C	0.0099497	0.0231764	0.0008224	0.0321764	0.0376584	3.45 ± 0.78	1.26	3.65	0.597 ± 0.026
13C2001	600 °C	0.0209945	0.0768963	0.0029307	0.1248517	0.2378955	5.62 ± 0.44	3.69	14.17	0.698 ± 0.029
13C2002	700 °C ✓	0.0098928	0.0714018	0.0022974	0.1362743	0.1097078	2.38 ± 0.57	3.62	15.46	0.821 ± 0.034
13C2004	800 °C ✓	0.0064884	0.0641307	0.0015166	0.1190757	0.0922447	2.29 ± 0.42	4.59	13.51	0.798 ± 0.033
13C2005	900 °C ✓	0.0039662	0.0399959	0.0007925	0.0674971	0.0510403	2.23 ± 0.74	4.17	7.66	0.726 ± 0.030
13C2007	1050 °C ✓	0.0100760	0.1117478	0.0012583	0.1064999	0.0730703	2.03 ± 0.43	2.40	12.08	0.410 ± 0.017
13C2008	1250 °C ✓	0.0260876	0.4533545	0.0030850	0.2305593	0.2217718	2.84 ± 0.46	2.80	26.16	0.219 ± 0.009
13C2010	1400 °C ✓	0.0060214	0.1953757	0.0007330	0.0643296	0.0608319	2.79 ± 0.59	3.31	7.30	0.142 ± 0.006
Σ		0.0934765	1.0360792	0.0134358	0.8812640	0.8842207				

Information on Analysis	Results	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD	39Ar(k) (%,n)	K/Ca ± 2σ
Sample = 156-3 Material = Groundmass Location = Kerguelen Plateau Analyst = Trevor Smith Project = KERGUELEN Mass Discrimination Law = LIN Irradiation = OSU2C13 J = 0.00163701 ± 0.00000405 FCT-3 = 28.201 ± 0.023 Ma	Age Plateau	0.81596 ± 0.09331	2.41 ± 0.28	1.77	82.18	0.219 ± 0.142
	Recalibrated	± 11.44%	± 11.44%	11%	6	
			Full External Error ± 0.28	2.26	2σ Confidence Limit	
			Analytical Error ± 0.28	1.3320	Error Magnification	
	Total Fusion Age	1.00336 ± 0.06598	2.96 ± 0.20		8	0.366 ± 0.008
	Recalibrated	± 6.58%	± 6.59%			
			Full External Error ± 0.21			
			Analytical Error ± 0.19			



Normal Isochron		39(k)/36(a) ± 2σ		40(a+r)/36(a) ± 2σ	r.i.
13C1999	500 °C		3.23 ± 0.02	299.28 ± 0.86	0.5790
13C2001	600 °C		5.95 ± 0.02	306.83 ± 0.91	0.8482
13C2002	700 °C	✓	13.78 ± 0.13	306.59 ± 2.76	0.9716
13C2004	800 °C	✓	18.35 ± 0.17	309.72 ± 2.75	0.9538
13C2005	900 °C	✓	17.02 ± 0.25	308.37 ± 4.45	0.9801
13C2007	1050 °C	✓	10.57 ± 0.06	302.75 ± 1.60	0.9088
13C2008	1250 °C	✓	8.84 ± 0.05	304.00 ± 1.41	0.8611
13C2010	1400 °C	✓	10.68 ± 0.08	305.60 ± 2.22	0.8865

Results	40(a)/36(a) ± 2σ		40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD
Normal Isochron Recalibrated	297.87 ± 4.14		0.61847 ± 0.35529	1.83 ± 1.05	1.66
	± 1.39%		± 57.45%	± 57.42%	16%
			Full External Error ± 1.05		
			Analytical Error ± 1.05		
Statistics	2σ Confidence Limit	2.41	Convergence	0.000000001143	
	Error Magnification	1.2893	Number of Iterations	6	
	Number of Data Points	6	Calculated Line	Weighted York-2	



Inverse Isochron		39(k)/40(a+r) ± 2σ		36(a)/40(a+r) ± 2σ	r.i.
13C1999	500 °C		0.0108055 ± 0.0000413	0.00334130 ± 0.00000965	0.0456
13C2001	600 °C		0.0193816 ± 0.0000352	0.00325912 ± 0.00000970	0.0369
13C2002	700 °C	✓	0.0449301 ± 0.0000973	0.00326169 ± 0.00002942	0.0730
13C2004	800 °C	✓	0.0592545 ± 0.0001634	0.00322876 ± 0.00002863	0.0430
13C2005	900 °C	✓	0.0551880 ± 0.0001604	0.00324287 ± 0.00004677	0.0285
13C2007	1050 °C	✓	0.0349120 ± 0.0000833	0.00330303 ± 0.00001740	0.0320
13C2008	1250 °C	✓	0.0290719 ± 0.0000792	0.00328946 ± 0.00001527	0.0108
13C2010	1400 °C	✓	0.0349585 ± 0.0001235	0.00327222 ± 0.00002378	0.1676

Results	40(a)/36(a) ± 2σ		40(r)/39(k) ± 2σ		Age ± 2σ (Ma)	MSWD
Inverse Isochron	297.89 ± 4.12		0.61758 ± 0.30528		1.82 ± 0.90	1.65
Clustered Points	± 1.38%		± 49.43%		± 49.41%	16%
			Full External Error ± 0.90			
			Analytical Error ± 0.90			
Statistics	2σ Confidence Limit	2.41	Convergence		0.0000000048	
	Error Magnification	1.2856	Number of Iterations		4	
	Number of Data Points	6	Calculated Line		Weighted York-2	
	Spreading Factor	1.9%				



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Relative Abundances		40Ar [V]	1σ	39Ar [V]	1σ	38Ar [V]	1σ	37Ar [V]	1σ	36Ar [V]	1σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	40Ar(r) (%)	39Ar(k) (%)	K/Ca ± 2σ
13C1999	500 °C	2.977817	0.0010563	0.0321920	0.0000605	0.0030513	0.0000210	0.0231764	0.0004989	0.0099559	0.0000139	1.17037 ± 0.26410	3.45 ± 0.78	1.26	3.65	0.597 ± 0.026
13C2001	600 °C	6.441885	0.0014377	0.1249035	0.0001099	0.0082860	0.0000347	0.0768963	0.0015977	0.0210153	0.0000309	1.90542 ± 0.14799	5.62 ± 0.44	3.69	14.17	0.698 ± 0.029
13C2002	700 °C	3.033169	0.0018104	0.1363224	0.0001231	0.0057071	0.0000307	0.0714018	0.0014605	0.0099121	0.0000442	0.80505 ± 0.19360	2.38 ± 0.57	3.62	15.46	0.821 ± 0.034
13C2004	800 °C	2.009685	0.0010297	0.1191188	0.0001524	0.0040933	0.0000283	0.0641307	0.0013323	0.0065056	0.0000286	0.77467 ± 0.14288	2.29 ± 0.42	4.59	13.51	0.798 ± 0.033
13C2005	900 °C	1.223108	0.0006680	0.0675240	0.0000909	0.0023075	0.0000311	0.0399959	0.0008326	0.0039769	0.0000285	0.75619 ± 0.25050	2.23 ± 0.74	4.17	7.66	0.726 ± 0.030
13C2007	1050 °C	3.050629	0.0009667	0.1065752	0.0001225	0.0043690	0.0000321	0.1117478	0.0022907	0.0101057	0.0000263	0.68611 ± 0.14735	2.03 ± 0.43	2.40	12.08	0.410 ± 0.017
13C2008	1250 °C	7.930896	0.0014658	0.2308644	0.0003109	0.0106476	0.0000291	0.4533545	0.0093157	0.0262079	0.0000603	0.96189 ± 0.15524	2.84 ± 0.46	2.80	26.16	0.219 ± 0.009
13C2010	1400 °C	1.840233	0.0019083	0.0644611	0.0000920	0.0026176	0.0000201	0.1953757	0.0040075	0.0060732	0.0000209	0.94563 ± 0.20156	2.79 ± 0.59	3.31	7.30	0.142 ± 0.006

Σ		28.507422	0.0038329	0.8819613	0.0004272	0.0410794	0.0000815	1.0360792	0.0107468	0.0937527	0.0000975					
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Information on Analysis and Constants Used in Calculations		Results						
		40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD	39Ar(k) (%.n)	K/Ca ± 2σ	
Sample = 156-3	Age Equations = Min et al. (2000)							
Material = Groundmass	Negative Intensities = Allowed							
Location = Kerguelen Plateau	Decay Constant 40K = 5.543 ± 0.044 E-10 1/a							
Analyst = Trevor Smith	Decay Constant 39Ar = 2.940 ± 0.029 E-07 1/h							
Project = KERGUELEN	Decay Constant 37Ar = 8.230 ± 0.082 E-04 1/h							
Mass Discrimination Law = LIN	Decay Constant 36Cl = 2.236 ± 0.045 E-06 1/a							
Irradiation = OSU2C13	Decay Constant 40K(EC,β <sup>+</sup> ) = 0.580 ± 0.009 E-10 1/a							
J = 0.00163701 ± 0.00000405	Decay Constant 40K(β <sup>-</sup> ) = 4.950 ± 0.043 E-10 1/a							
FCT-3 = 28.201 ± 0.023 Ma	Atmospheric Ratio 40/36(a) = 295.50							
IGSN = Undefined	Atmospheric Ratio 38/36(a) = 0.1869							
Preferred Age = Undefined	Production Ratio 39/37(ca) = 0.000673							
Classification = Undefined	Production Ratio 38/37(ca) = 0.000139							
Experiment Type = Undefined	Production Ratio 36/37(ca) = 0.000264							
Extraction Method = Undefined	Production Ratio 40/39(k) = 0.001010							
Heating = 0 sec	Production Ratio 38/39(k) = 0.011380							
Isolation = 15.00 min	Production Ratio 36/38(cl) = 316.00 ± 15.80							
Instrument = MAP215-50	Scaling Ratio K/Ca = 0.430							
Lithology = Undefined	Abundance Ratio 40K/K = 1.1700 ± 0.0199 E-04							
Lat-Lon = Undefined - Undefined	Atomic Weight K = 39.0983 ± 0.0001 g							
R1 ratio = Undefined	Recalibrated to FCT-3 Secondary Standard							
R2 ratio = Undefined	Standard Age = 28.201 ± 0.023 Ma							
R3 ratio = Undefined								
R4 ratio = Undefined								
R5 ratio = Undefined								
Collector Calibrations =								



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Degassing Patterns		36Ar(a) [V]	%1σ	36Ar(c) [V]	%1σ	36Ar(ca) [V]	%1σ	36Ar(cl) [V]	%1σ	37Ar(ca) [V]	%1σ	38Ar(a) [V]	%1σ	38Ar(c) [V]	%1σ	38Ar(k) [V]	%1σ	38Ar(ca) [V]	%1σ	38Ar(cl) [V]	%1σ	39Ar(k) [V]	%1σ	39Ar(ca) [V]	%1σ	40Ar(r) [V]	%1σ	40Ar(a) [V]	%1σ	40Ar(c) [V]	%1σ	40Ar(k) [V]	%1σ	
	13C1999	500 °C	0.0099497	0.14	0.0000000	0.00	0.0000061	2.15	0.0000002	5.97	0.0231764	2.15	0.0018596	0.14	0.0000000	0.00	0.0003662	0.19	0.0000032	2.15	0.0008224	8.04	0.0321764	0.19	0.0000156	2.15	0.0376584	11.28	2.940126	0.14	0.0000000	0.00	0.0000325	0.19
	13C2001	600 °C	0.0209945	0.15	0.0000000	0.00	0.0000203	2.08	0.0000006	5.52	0.0768963	2.08	0.0039239	0.15	0.0000000	0.00	0.0014208	0.09	0.0000107	2.08	0.0029307	7.71	0.1248517	0.09	0.0000518	2.08	0.2378955	3.88	6.203863	0.15	0.0000000	0.00	0.0001261	0.09
	13C2002	700 °C	✓ 0.0098928	0.45	0.0000000	0.00	0.0000189	2.05	0.0000005	5.56	0.0714018	2.05	0.0018490	0.45	0.0000000	0.00	0.0015508	0.09	0.0000099	2.05	0.0022974	7.74	0.1362743	0.09	0.0000481	2.05	0.1097078	12.02	2.923324	0.45	0.0000000	0.00	0.0001376	0.09
	13C2004	800 °C	✓ 0.0064884	0.44	0.0000000	0.00	0.0000169	2.08	0.0000003	5.71	0.0641307	2.08	0.0012127	0.44	0.0000000	0.00	0.0013551	0.13	0.0000089	2.08	0.0015166	7.85	0.1190757	0.13	0.0000432	2.08	0.0922447	9.22	1.917320	0.44	0.0000000	0.00	0.0001203	0.13
	13C2005	900 °C	✓ 0.0039662	0.72	0.0000000	0.00	0.0000106	2.08	0.0000002	6.70	0.0399959	2.08	0.0007413	0.72	0.0000000	0.00	0.0007681	0.13	0.0000056	2.08	0.0007925	8.59	0.0674971	0.13	0.0000269	2.08	0.0510403	16.56	1.172000	0.72	0.0000000	0.00	0.0000682	0.13
	13C2007	1050 °C	✓ 0.0100760	0.26	0.0000000	0.00	0.0000295	2.05	0.0000003	5.97	0.1117478	2.05	0.0018832	0.26	0.0000000	0.00	0.0012120	0.11	0.0000155	2.05	0.0012583	8.04	0.1064999	0.11	0.0000752	2.05	0.0730703	10.74	2.977451	0.26	0.0000000	0.00	0.0001076	0.11
	13C2008	1250 °C	✓ 0.0260876	0.23	0.0000000	0.00	0.0001197	2.05	0.0000006	5.48	0.4533545	2.05	0.0048758	0.23	0.0000000	0.00	0.0026238	0.13	0.0000630	2.05	0.0030850	7.68	0.2305593	0.13	0.0003051	2.05	0.2217718	8.07	7.708891	0.23	0.0000000	0.00	0.0002329	0.13
	13C2010	1400 °C	✓ 0.0060214	0.35	0.0000000	0.00	0.0000516	2.05	0.0000001	6.07	0.1953757	2.05	0.0011254	0.35	0.0000000	0.00	0.0007321	0.14	0.0000272	2.05	0.0007330	8.11	0.0643296	0.14	0.0001315	2.05	0.0608319	10.66	1.779336	0.35	0.0000000	0.00	0.0000650	0.14
	Σ	0.0934765	0.10	0.0000000	0.00	0.0002735	1.04	0.0000027	2.25	1.0360792	1.04	0.0174708	0.10	0.0000000	0.00	0.0100288	0.05	0.0001440	1.04	0.0134358	3.12	0.8812640	0.05	0.0006973	1.04	0.8842207	3.29	27.622311	0.10	0.0000000	0.00	0.0008901	0.05	
	Σ							0.0937527	0.10	1.0360792	1.04									0.0410794	1.02			0.8819613	0.05							28.507422	0.14	



Additional Parameters		40Ar/39Ar	1σ	37Ar/39Ar	1σ	36Ar/39Ar	1σ	Time (days)	37Ar (decay)	39Ar (decay)	40Ar (moles)
13C1999	500 °C	92.501749	0.176826	0.719943	0.015557	0.309268	0.000724	102.682	7.618974	1.00072567	5.956E-13
13C2001	600 °C	51.574913	0.046835	0.615646	0.012803	0.168253	0.000288	102.718	7.624411	1.00072592	1.288E-12
13C2002	700 °C ✓	22.249971	0.024080	0.523772	0.010724	0.072711	0.000331	102.737	7.627235	1.00072606	6.066E-13
13C2004	800 °C ✓	16.871263	0.023248	0.538376	0.011206	0.054615	0.000250	102.773	7.632677	1.00072631	4.019E-13
13C2005	900 °C ✓	18.113678	0.026314	0.592321	0.012357	0.058896	0.000430	102.791	7.635400	1.00072644	2.446E-13
13C2007	1050 °C ✓	28.624206	0.034118	1.048536	0.021527	0.094823	0.000270	102.828	7.640952	1.00072670	6.101E-13
13C2008	1250 °C ✓	34.353046	0.046701	1.963726	0.040438	0.113521	0.000303	102.847	7.643783	1.00072683	1.586E-12
13C2010	1400 °C ✓	28.547978	0.050350	3.030911	0.062320	0.094215	0.000352	102.882	7.649132	1.00072708	3.680E-13



Procedure Blanks		36Ar [V]	1σ	37Ar [V]	1σ	38Ar [V]	1σ	39Ar [V]	1σ	40Ar [V]	1σ
13C1999	500 °C	0.0002684	0.0000113	0.0000211	0.0000156	0.0000005	0.0000027	0.0000092	0.0000095	0.0008254	0.0000194
13C2001	600 °C	0.0003532	0.0000119	0.0000238	0.0000078	0.0000231	0.0000085	0.0000458	0.0000181	0.0093799	0.0000319
13C2002	700 °C	0.0003532	0.0000119	0.0000238	0.0000078	0.0000231	0.0000085	0.0000458	0.0000181	0.0093799	0.0000319
13C2004	800 °C	0.0003262	0.0000123	0.0000344	0.0000179	0.0000108	0.0000171	0.0000744	0.0000286	0.0032252	0.0000898
13C2005	900 °C	0.0003262	0.0000123	0.0000344	0.0000179	0.0000108	0.0000171	0.0000744	0.0000286	0.0032252	0.0000898
13C2007	1050 °C	0.0003262	0.0000123	0.0000505	0.0000135	0.0000398	0.0000171	0.0001131	0.0000128	0.0025162	0.0000667
13C2008	1250 °C	0.0003262	0.0000123	0.0000505	0.0000135	0.0000398	0.0000171	0.0001131	0.0000128	0.0025162	0.0000667
13C2010	1400 °C	0.0003264	0.0000122	0.0000391	0.0000192	0.0000100	0.0000136	0.0000960	0.0000225	0.0029901	0.0000983



OSU Argon Geochronology Lab																						
Intercept Values		36Ar [V]	1σ	r2		37Ar [V]	1σ	r2		38Ar [V]	1σ	r2		39Ar [V]	1σ	r2		40Ar [V]	1σ	r2		
	13C1999	500 °C	0.0106083	0.0000090	0.9987	EXP #	0.0031522	0.0000160	0.9430	EXP #	0.0031133	0.0000213	0.6430	LIN #	0.0325101	0.0000603	0.9987	LIN # 3	2.9837142	0.0010579	0.9998	EXP # 2 3 4
	13C2001	600 °C	0.0221764	0.0000298	0.9973	LIN # 5 9	0.0104040	0.0000447	0.5909	EXP #	0.0084751	0.0000343	0.8535	LIN #	0.1262067	0.0001096	0.9984	EXP # 3 6 9	6.4616033	0.0014397	0.9998	EXP #
	13C2002	700 °C	0.0106488	0.0000444	0.9726	LIN #	0.0096607	0.0000214	0.9817	EXP # 5 7	0.0058457	0.0000301	0.9133	LIN #	0.1377681	0.0001230	0.9949	LIN # 2	3.0480353	0.0018134	0.9993	EXP # 2 3
	13C2004	800 °C	0.0070865	0.0000270	0.9826	EXP # 1	0.0086872	0.0000326	0.9740	EXP # 2	0.0041886	0.0000233	0.9065	LIN #	0.1204648	0.0001513	0.9956	EXP # 8	2.0173483	0.0010280	0.9996	EXP # 2 3
	13C2005	900 °C	0.0044591	0.0000269	0.9520	LIN # 1 4	0.0054289	0.0000163	0.9811	EXP #	0.0023659	0.0000267	0.6348	LIN #	0.0683193	0.0000873	0.9932	EXP # 5 9	1.2290374	0.0006634	0.9992	EXP # 1
	13C2007	1050 °C	0.0108283	0.0000244	0.9943	LIN # 3 8 9	0.0151132	0.0000365	0.9907	EXP # 1	0.0044995	0.0000279	0.7468	LIN #	0.1078367	0.0001231	0.9689	EXP # 2 7 8	3.0601838	0.0009666	0.9998	EXP # 2 11
	13C2008	1250 °C	0.0275607	0.0000614	0.9949	EXP # 2 6 8 10	0.0611359	0.0001783	0.9911	EXP # 2 5 8	0.0109083	0.0000243	0.9604	LIN #	0.2334651	0.0003140	0.8672	EXP # 1 2 6 7 9	7.9517012	0.0014676	0.9998	EXP #
	13C2010	1400 °C	0.0066374	0.0000180	0.9926	LIN # 1	0.0263432	0.0000657	0.9956	EXP # 5	0.0026817	0.0000153	0.8311	LIN #	0.0652453	0.0000902	0.9660	EXP # 3 4 8	1.8472871	0.0019099	0.9982	EXP # 2 3



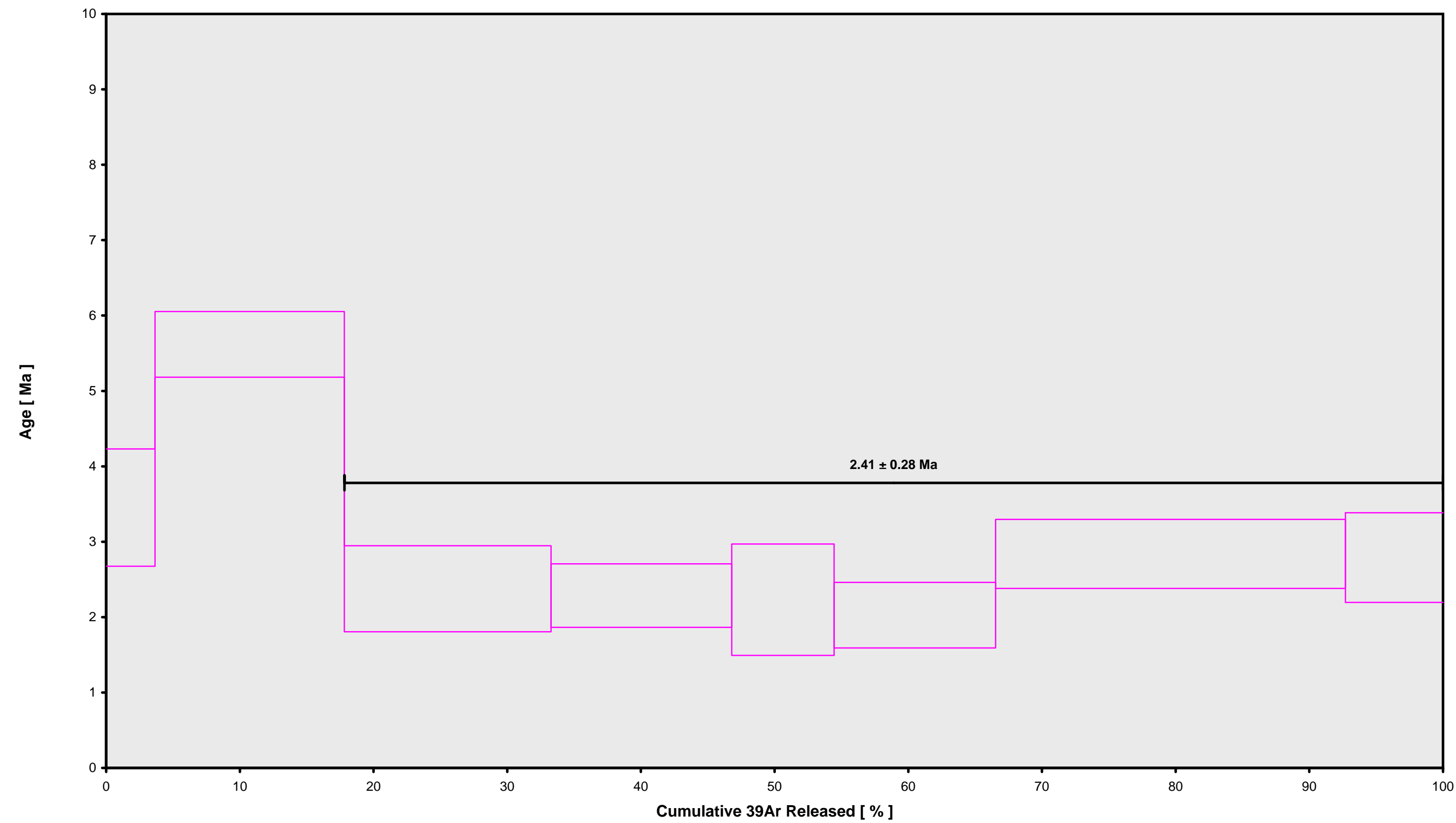
OSU Argon Geochronology Lab																																		
Sample Parameters			Sample	Material	Location	Analyst	Temp	Standard Name	Standard (in Ma)	%1σ	Standard Reference	Standard 40Ar/39Ar	%1σ	J	%1σ	Air 40Ar/36Ar	%1σ	MDF	%1σ	Volume Ratio	Sensitivity (mol/volt)	Day	Month	Year	Hour	Min	Resist	Irradiation	X-pos	Y-pos	Z/H-pos	Project	Experiment	Nmb
	13C1999	500 °C	156-3	Groundmass	Kerguelen Plateau	Trevor Smith	500	FCT-3	28.201	0.083	Kuiper et al., 2008			0.00163701	0.247			1.0092	0.001	0.9983	2E-13	17	JUL	2013	8	23	1	OSU2C13	0.00	0.00	26.00	Kerguelen	13C1999	01
	13C2001	600 °C	156-3	Groundmass	Kerguelen Plateau	Trevor Smith	600	FCT-3	28.201	0.083	Kuiper et al., 2008			0.00163701	0.247			1.0092	0.001	0.9984	2E-13	17	JUL	2013	9	15	1	OSU2C13	0.00	0.00	26.00	Kerguelen	13C1999	01
	13C2002	700 °C	156-3	Groundmass	Kerguelen Plateau	Trevor Smith	700	FCT-3	28.201	0.083	Kuiper et al., 2008			0.00163701	0.247			1.0092	0.001	0.9982	2E-13	17	JUL	2013	9	42	1	OSU2C13	0.00	0.00	26.00	Kerguelen	13C1999	01
	13C2004	800 °C	156-3	Groundmass	Kerguelen Plateau	Trevor Smith	800	FCT-3	28.201	0.083	Kuiper et al., 2008			0.00163701	0.247			1.0092	0.001	0.9978	2E-13	17	JUL	2013	10	34	1	OSU2C13	0.00	0.00	26.00	Kerguelen	13C1999	01
	13C2005	900 °C	156-3	Groundmass	Kerguelen Plateau	Trevor Smith	900	FCT-3	28.201	0.083	Kuiper et al., 2008			0.00163701	0.247			1.0092	0.001	0.9978	2E-13	17	JUL	2013	11	0	1	OSU2C13	0.00	0.00	26.00	Kerguelen	13C1999	01
	13C2007	1050 °C	156-3	Groundmass	Kerguelen Plateau	Trevor Smith	1050	FCT-3	28.201	0.083	Kuiper et al., 2008			0.00163701	0.247			1.0092	0.001	0.9977	2E-13	17	JUL	2013	11	53	1	OSU2C13	0.00	0.00	26.00	Kerguelen	13C1999	01
	13C2008	1250 °C	156-3	Groundmass	Kerguelen Plateau	Trevor Smith	1250	FCT-3	28.201	0.083	Kuiper et al., 2008			0.00163701	0.247			1.0092	0.001	0.9977	2E-13	17	JUL	2013	12	20	1	OSU2C13	0.00	0.00	26.00	Kerguelen	13C1999	01
	13C2010	1400 °C	156-3	Groundmass	Kerguelen Plateau	Trevor Smith	1400	FCT-3	28.201	0.083	Kuiper et al., 2008			0.00163701	0.247			1.0092	0.001	0.9978	2E-13	17	JUL	2013	13	11	1	OSU2C13	0.00	0.00	26.00	Kerguelen	13C1999	01



Irradiation Constants		OSU Argon Geochronology Lab																										
		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	
13C1999	500 °C	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0	
13C2001	600 °C	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0	
13C2002	700 °C	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0	
13C2004	800 °C	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0	
13C2005	900 °C	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0	
13C2007	1050 °C	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0	
13C2008	1250 °C	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0	
13C2010	1400 °C	295.5	0	0.018	35	0.1869	0	1.493	3	0.000673	0	0.000139	0	0.000264	0	0.00101	0	0.01138	0	0	0	0.43	0	0	0	0	0	



13C1999.AGE >>> 156-3 >>> KERGUELEN PROJECT



Ar-Ages in Ma

WEIGHTED PLATEAU

2.41 ± 0.28

TOTAL FUSION

2.96 ± 0.20

NORMAL ISOCHRON

1.83 ± 1.05

INVERSE ISOCHRON

1.82 ± 0.90

MSWD (PROBABILITY)

1.77 (11%)

Sample Info

Groundmass

Kerguelen Plateau

Trevor Smith

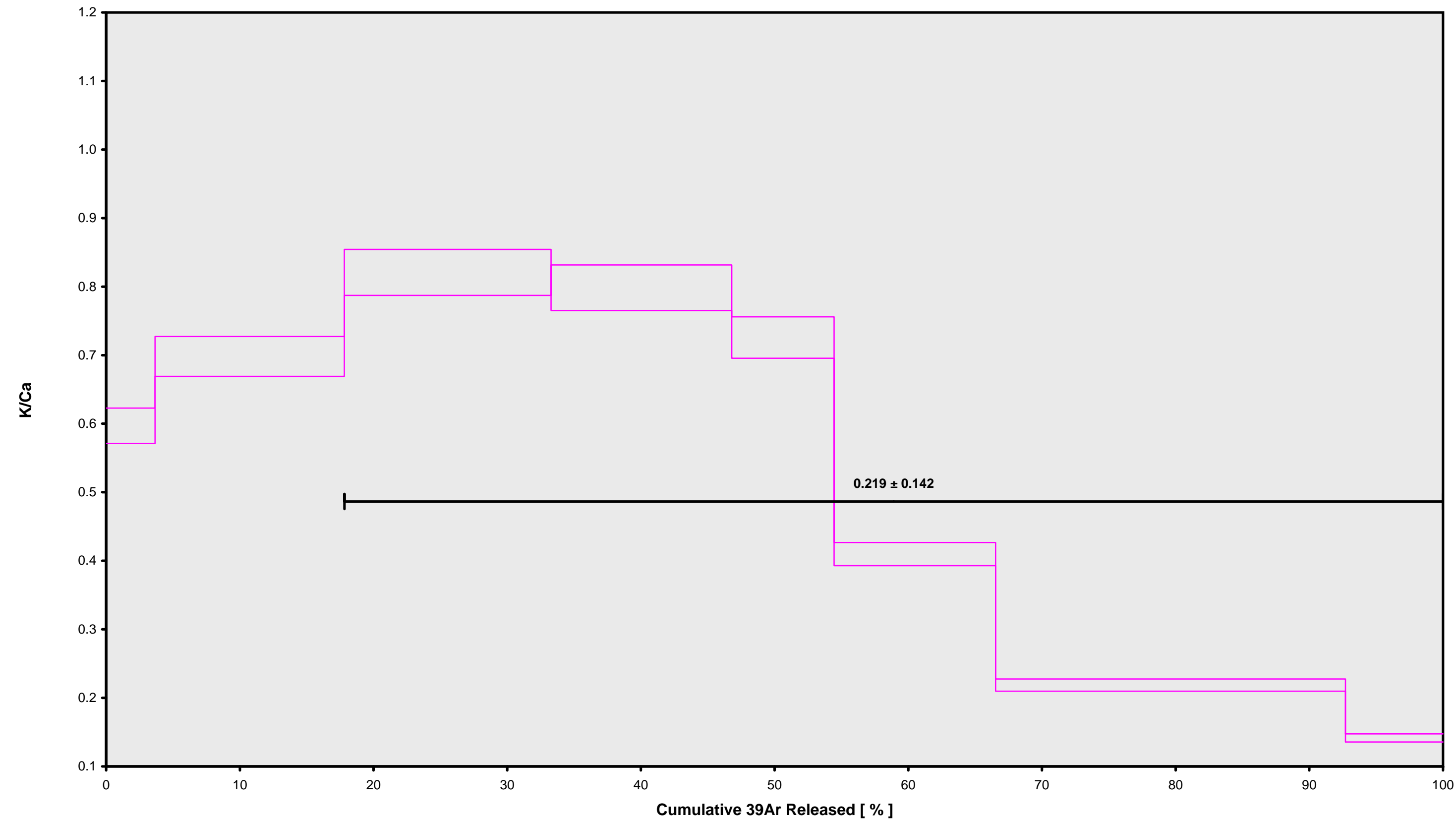
IRR = OSU2C13

J = 0.00163701 ± 0.00000405

RECALIBRATED AGE



13C1999.AGE >>> 156-3 >>> KERGUELEN PROJECT



**Ar-Ages in Ma**

**WEIGHTED PLATEAU**

**2.41 ± 0.28**

**TOTAL FUSION**

**2.96 ± 0.20**

**NORMAL ISOCHRON**

**1.83 ± 1.05**

**INVERSE ISOCHRON**

**1.82 ± 0.90**

**Sample Info**

**Groundmass**

**Kerguelen Plateau**

**Trevor Smith**

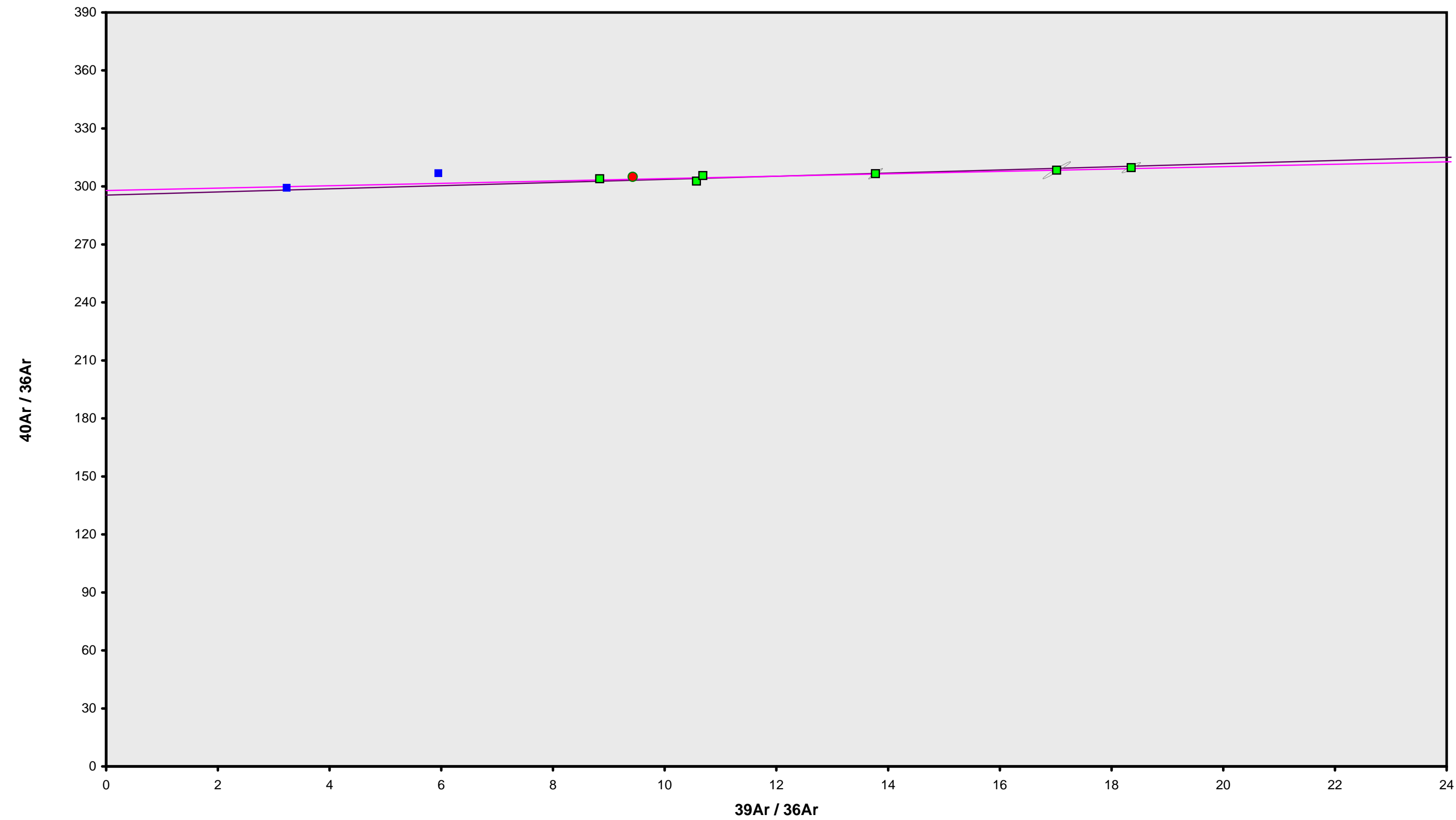
**IRR = OSU2C13**

**J = 0.00163701 ± 0.00000405**

**RECALIBRATED AGE**



13C1999.AGE >>> 156-3 >>> KERGUELEN PROJECT



Ar-Ages in Ma

WEIGHTED PLATEAU

2.41 ± 0.28

TOTAL FUSION

2.96 ± 0.20

NORMAL ISOCHRON

1.83 ± 1.05

INVERSE ISOCHRON

1.82 ± 0.90

MSWD (PROBABILITY)

1.66 (16%)

40AR/36AR INTERCEPT

297.9 ± 4.1

Sample Info

Groundmass

Kerguelen Plateau

Trevor Smith

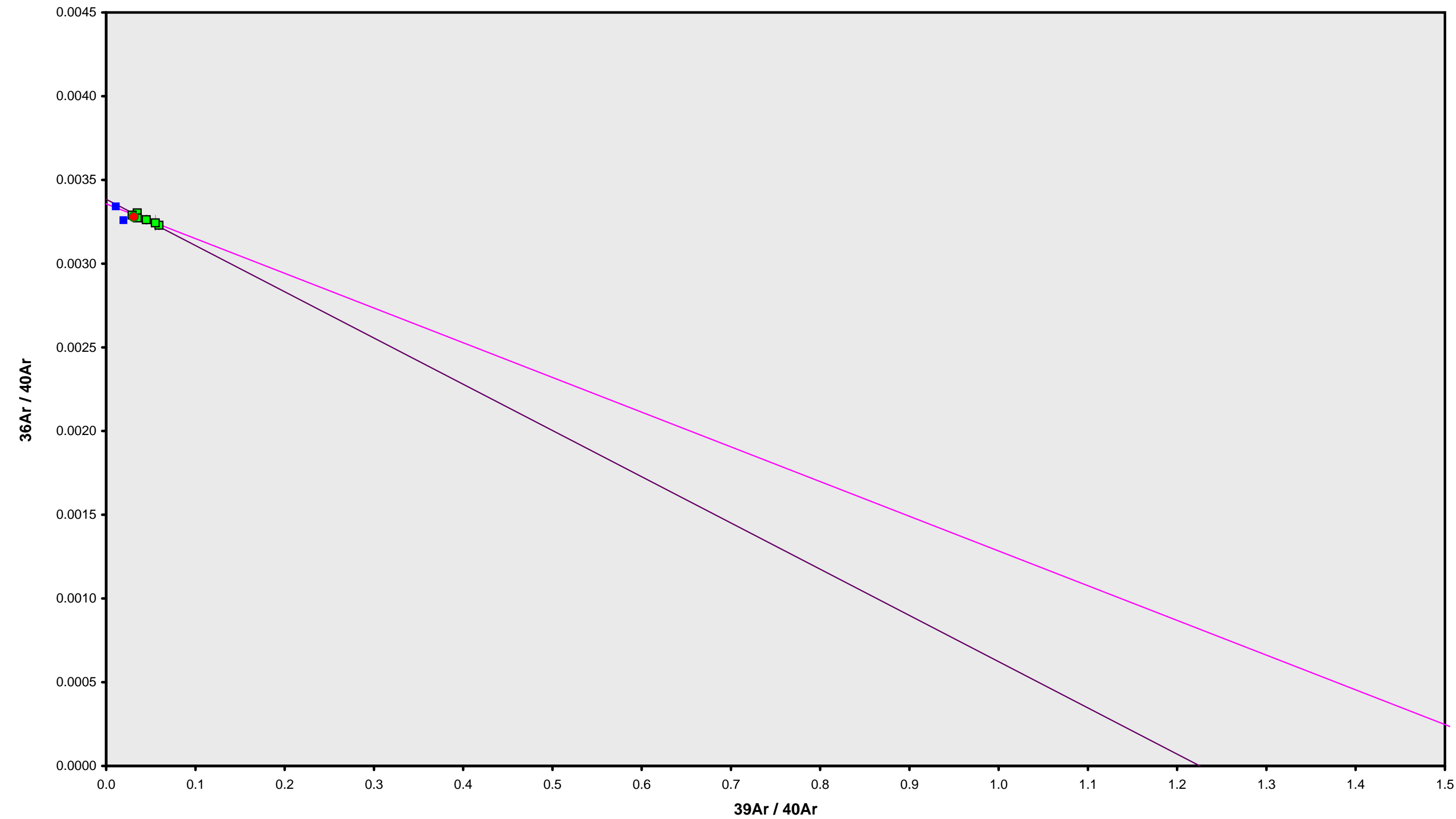
IRR = OSU2C13

J = 0.00163701 ± 0.00000405

RECALIBRATED AGE



13C1999.AGE >>> 156-3 >>> KERGUELEN PROJECT



Ar-Ages in Ma

WEIGHTED PLATEAU

$2.41 \pm 0.28$

TOTAL FUSION

$2.96 \pm 0.20$

NORMAL ISOCHRON

$1.83 \pm 1.05$

INVERSE ISOCHRON

$1.82 \pm 0.90$

MSWD (PROBABILITY)

1.65 (16%)

SPREADING FACTOR

1.9%

40AR/36AR INTERCEPT

$297.9 \pm 4.1$

Sample Info

Groundmass

Kerguelen Plateau

Trevor Smith

IRR = OSU2C13

$J = 0.00163701 \pm 0.00000405$

RECALIBRATED AGE