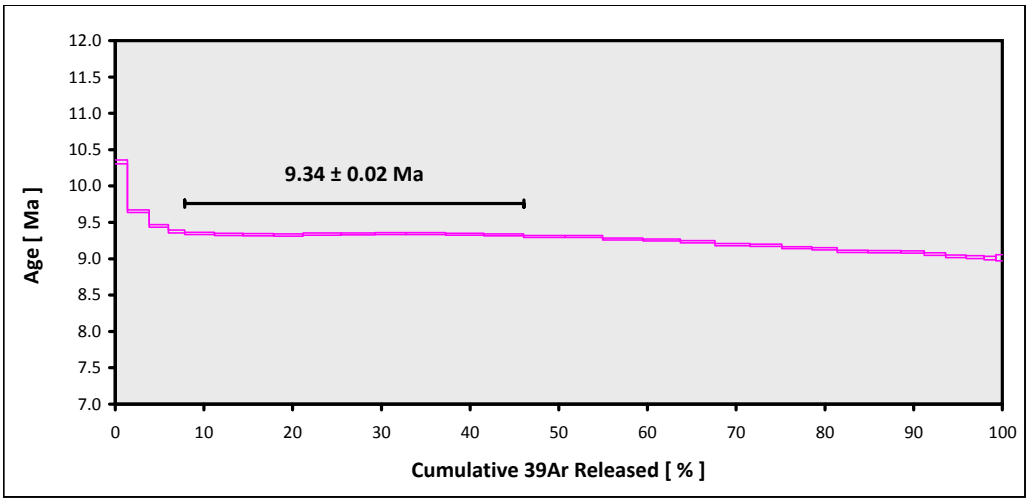
EXP#13D03867 > MV1203-D42-17 (DARK) > Groundmass > MV1203 (13-INT-04)
WALVIS RIDGE > ESK GUYOT
13-OSU-05 > Incremental Heating > Susan Schnur

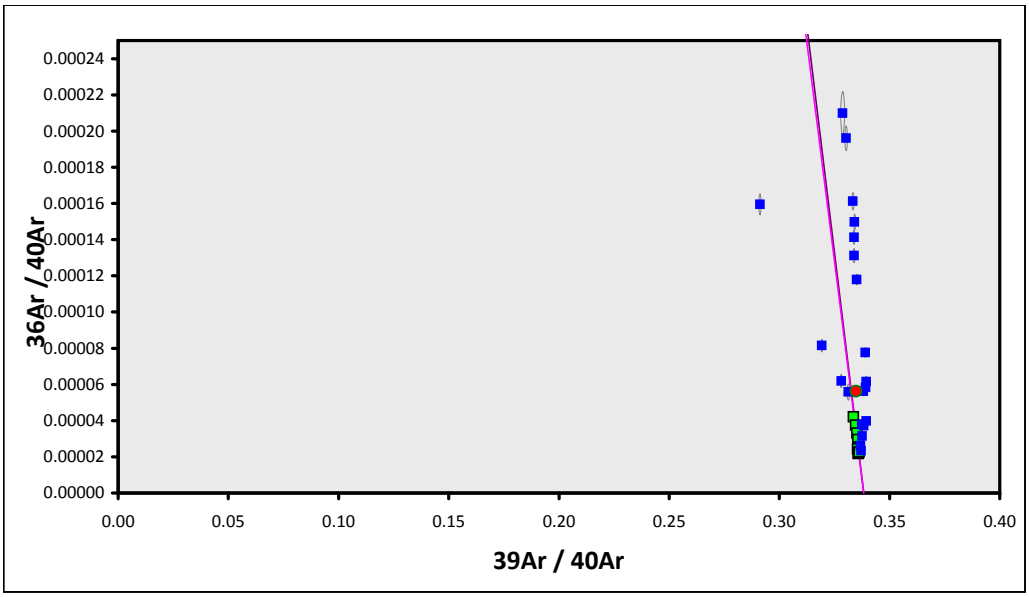
Information on Analysis and Constants Used in Calculations

Project = **MV1203 (13-INT-04)**
Sample = **MV1203-D42-17 (DARK)**
Material = **Groundmass**
Location = **Esk Guyot**
Region = **Walvis Ridge**
Analyst = **Susan Schnur**
Irradiation = **13-OSU-05**
Position = **X: | Y: | Z/H: 19.37 mm**
FCT-NM Age = **28.201 ± 0.023 Ma**
FCT-NM Reference = **Kuiper et al (2008)**
FCT-NM 40Ar/39Ar Ratio = **8.97572 ± 0.01158**
FCT-NM J-value = **0.00175110 ± 0.00000226**
Air Shot 40Ar/36Ar = **302.7280 ± 0.2876**
Air Shot MDF = **0.99402323 ± 0.00062389 (LIN)**
Experiment Type = **Incremental Heating**
Extraction Method = **Bulk Laser Heating**
Heating = **77 sec**
Isolation = **5.52 min**
Instrument = **ARGUS-VI-D**
Preferred Age = **Plateau Age**
Age Classification = **Eruption Age**
IGSN = **IESRS0001**
Rock Class = **Igneous>Volcanic>Mafic**
Lithology = **Trachyte**
Lat-Lon = **38°41.2'S - 11°48.1'W**
Age Equations = **Min et al. (2000)**
Negative Intensities = **Allowed**
Collector Calibrations = **40Ar 36Ar**
Decay 40K = **5.530 ± 0.048 E-10 1/a**
Decay 39Ar = **2.940 ± 0.016 E-07 1/h**
Decay 37Ar = **8.230 ± 0.012 E-04 1/h**
Decay 36Cl = **2.257 ± 0.015 E-06 1/a**
Decay 40K(EC,β^+) = **0.580 ± 0.009 E-10 1/a**
Decay 40K(β^-) = **4.950 ± 0.043 E-10 1/a**
Atmospheric 40/36(a) = **295.50**
Atmospheric 38/36(a) = **0.1869**
Production 39/37(ca) = **0.0006756 ± 0.0000089**
Production 38/37(ca) = **0.0000718 ± 0.0000092**
Production 36/37(ca) = **0.0002663 ± 0.0000004**
Production 40/39(k) = **0.003823 ± 0.000102**
Production 38/39(k) = **0.012031 ± 0.000019**
Production 36/38(cl) = **262.80 ± 1.71**
Scaling Ratio K/Ca = **0.430**
Abundance Ratio 40K/K = **1.1700 ± 0.0100 E-04**
Atomic Weight K = **39.0983 ± 0.0001 g**

Good, but dirtier than LIGHT fraction so use LIGHT as final age.

Results	40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD	39Ar(k) (%,n)	K/Ca ± 2σ
Age Plateau		2.95655 ± 0.00154	**9.34 ± 0.02**	1.18	38.22	5.20 ± 0.13
		± 0.05%	**± 0.26%**	31%	10	
		Full External Error ± 0.21		1.94	2σ Confidence Limit	
		Analytical Error ± 0.00		1.0844	Error Magnification	
Total Fusion Age		2.93678 ± 0.00088	**9.28 ± 0.02**		31	4.81 ± 0.07
		± 0.03%	**± 0.26%**			
		Full External Error ± 0.21				
		Analytical Error ± 0.00				
Normal Isochron	**278.40 ± 85.02**	2.95797 ± 0.00727	**9.34 ± 0.03**	1.39	38.22	
	± 30.54%	± 0.25%	**± 0.36%**	19%	10	
		Full External Error ± 0.21		2.00	2σ Confidence Limit	
		Analytical Error ± 0.02		1.1803	Error Magnification	
Inverse Isochron	**306.37 ± 79.96**	2.95565 ± 0.00712	**9.34 ± 0.03**	1.31	38.22	
Clustered Points	**± 26.10%**	± 0.24%	**± 0.35%**	23%	10	
		Full External Error ± 0.21		2.00	2σ Confidence Limit	
		Analytical Error ± 0.02		1.1453	Error Magnification	
				1%	Spreading Factor	





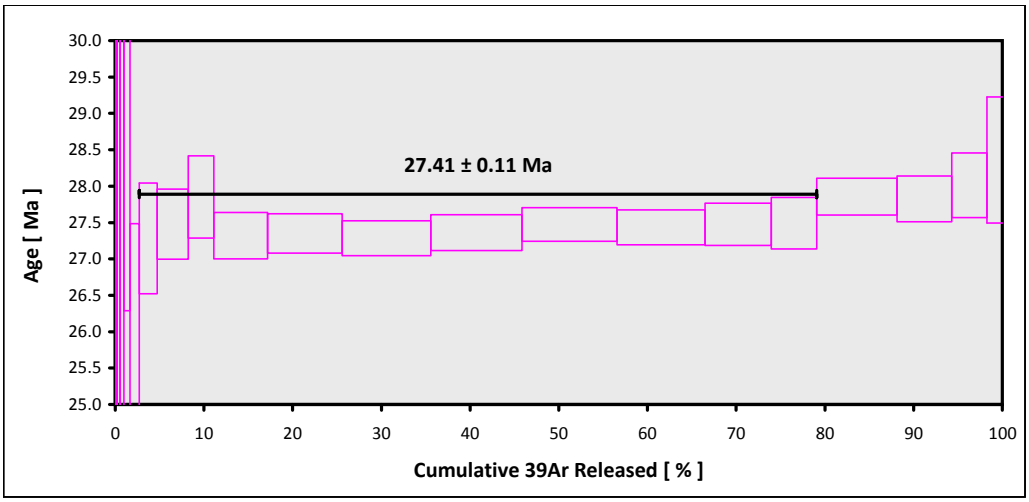
EXP#13D03940 > MV1203-D37-01 > Plagioclase > MV1203 (13-INT-04)
WALVIS RIDGE > OMURA GUYOT
13-OSU-05 > Incremental Heating > Susan Schnur

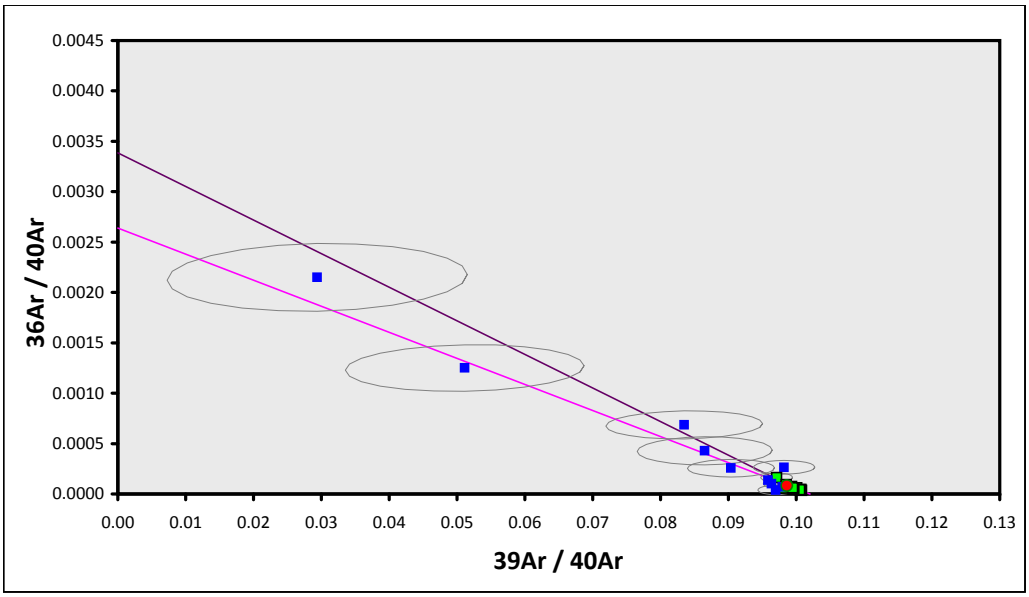
Information on Analysis and Constants Used in Calculations

Project = **MV1203 (13-INT-04)**
Sample = **MV1203-D37-01**
Material = **Plagioclase**
Location = **Omura Guyot**
Region = **Walvis Ridge**
Analyst = **Susan Schnur**
Irradiation = **13-OSU-05**
Position = **X: | Y: | Z/H: 64.4 mm**
FCT-NM Age = **28.201 ± 0.023 Ma**
FCT-NM Reference = **Kuiper et al (2008)**
FCT-NM 40Ar/39Ar Ratio = **10.13215 ± 0.01155**
FCT-NM J-value = **0.00155124 ± 0.00000177**
Air Shot 40Ar/36Ar = **302.7820 ± 0.2846**
Air Shot MDF = **0.99397965 ± 0.00062288 (LIN)**
Experiment Type = **Incremental Heating**
Extraction Method = **Bulk Laser Heating**
Heating = **60 sec**
Isolation = **5.52 min**
Instrument = **ARGUS-VI-D**
Preferred Age = **Plateau Age**
Age Classification = **Eruption Age**
IGSN = **IESRS0002**
Rock Class = **Igneous>Volcanic>Mafic**
Lithology = **Trachybasalt**
Lat-Lon = **37°33.0'S - 8°27.1'W**
Age Equations = **Min et al. (2000)**
Negative Intensities = **Allowed**
Collector Calibrations = **40Ar 36Ar**
Decay 40K = **5.530 ± 0.048 E-10 1/a**
Decay 39Ar = **2.940 ± 0.016 E-07 1/h**
Decay 37Ar = **8.230 ± 0.012 E-04 1/h**
Decay 36Cl = **2.257 ± 0.015 E-06 1/a**
Decay 40K(EC,β^+) = **0.580 ± 0.009 E-10 1/a**
Decay 40K(β^-) = **4.950 ± 0.043 E-10 1/a**
Atmospheric 40/36(a) = **295.50**
Atmospheric 38/36(a) = **0.1869**
Production 39/37(ca) = **0.0006756 ± 0.0000089**
Production 38/37(ca) = **0.0000718 ± 0.0000092**
Production 36/37(ca) = **0.0002663 ± 0.0000004**
Production 40/39(k) = **0.003823 ± 0.000102**
Production 38/39(k) = **0.012031 ± 0.000019**
Production 36/38(cl) = **262.80 ± 1.71**
Scaling Ratio K/Ca = **0.430**
Abundance Ratio 40K/K = **1.1700 ± 0.0100 E-04**
Atomic Weight K = **39.0983 ± 0.0001 g**

Good, although isochron not well-developed.

Results	40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD	39Ar(k) (%,n)	K/Ca ± 2σ
Age Plateau		9.84507 ± 0.03273	**27.41 ± 0.11**	0.52	76.36	0.0071 ± 0.0001
		± 0.33%	**± 0.40%**	88%	11	
		Full External Error ± 0.63		1.89	2σ Confidence Limit	
		Analytical Error ± 0.09		1.0000	Error Magnification	
Total Fusion Age		9.88807 ± 0.03153	**27.53 ± 0.11**		21	0.0071 ± 0.0000
		± 0.32%	**± 0.39%**			
		Full External Error ± 0.63				
		Analytical Error ± 0.09				
Normal Isochron	**350.49 ± 173.63**	9.80745 ± 0.10335	**27.30 ± 0.29**	0.38	76.36	
	± 49.54%	± 1.05%	**± 1.07%**	95%	11	
		Full External Error ± 0.68		1.94	2σ Confidence Limit	
		Analytical Error ± 0.29		1.0000	Error Magnification	
Inverse Isochron	**378.84 ± 185.51**	9.79896 ± 0.11215	**27.28 ± 0.32**	0.46	76.36	
Clustered Points	**± 48.97%**	± 1.14%	**± 1.16%**	90%	11	
		Full External Error ± 0.69		1.94	2σ Confidence Limit	
		Analytical Error ± 0.31		1.0000	Error Magnification	
				4%	Spreading Factor	





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

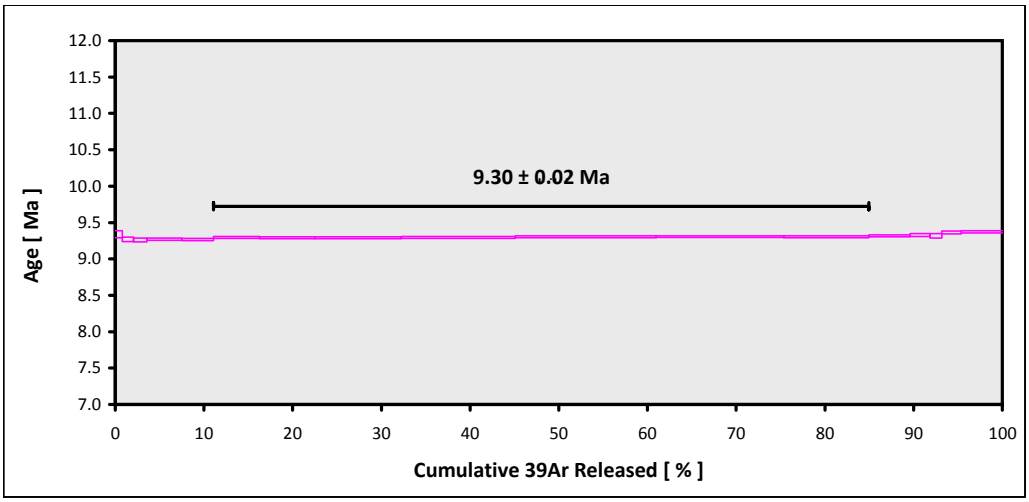
EXP#13D03970 > MV1203-D42-08 > K Feldspar > MV1203 (13-INT-04)
WALVIS RIDGE > ESK GUYOT
13-OSU-05 > Incremental Heating > Susan Schnur

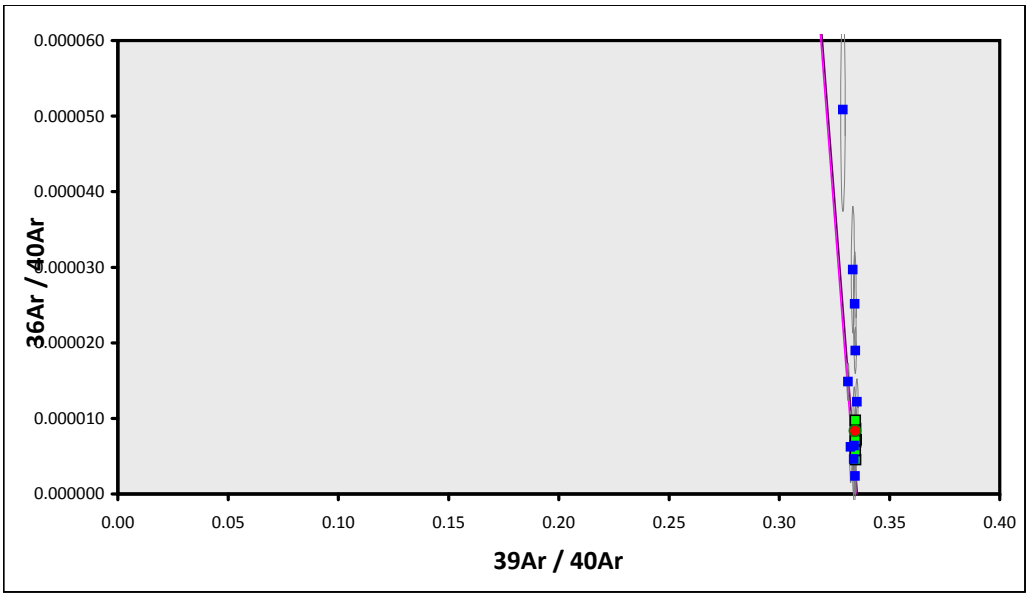
Information on Analysis and Constants Used in Calculations

Project = **MV1203 (13-INT-04)**
Sample = **MV1203-D42-08**
Material = **K Feldspar**
Location = **Esk Guyot**
Region = **Walvis Ridge**
Analyst = **Susan Schnur**
Irradiation = **13-OSU-05**
Position = **X: | Y: | Z/H: 26.44 mm**
FCT-NM Age = **28.201 ± 0.023 Ma**
FCT-NM Reference = **Kuiper et al (2008)**
FCT-NM 40Ar/39Ar Ratio = **9.09148 ± 0.01155**
FCT-NM J-value = **0.00172880 ± 0.00000220**
Air Shot 40Ar/36Ar = **302.7810 ± 0.2846**
Air Shot MDF = **0.99398046 ± 0.00062288 (LIN)**
Experiment Type = **Incremental Heating**
Extraction Method = **Bulk Laser Heating**
Heating = **60 sec**
Isolation = **5.52 min**
Instrument = **ARGUS-VI-D**
Preferred Age = **Plateau Age**
Age Classification = **Eruption Age**
IGSN = **IESRS0003**
Rock Class = **Igneous>Volcanic>Mafic**
Lithology = **Trachyte**
Lat-Lon = **38°41.2'S - 11°48.1'W**
Age Equations = **Min et al. (2000)**
Negative Intensities = **Allowed**
Collector Calibrations = **40Ar 36Ar**
Decay 40K = **5.530 ± 0.048 E-10 1/a**
Decay 39Ar = **2.940 ± 0.016 E-07 1/h**
Decay 37Ar = **8.230 ± 0.012 E-04 1/h**
Decay 36Cl = **2.257 ± 0.015 E-06 1/a**
Decay 40K(EC,β^+) = **0.580 ± 0.009 E-10 1/a**
Decay 40K(β^-) = **4.950 ± 0.043 E-10 1/a**
Atmospheric 40/36(a) = **295.50**
Atmospheric 38/36(a) = **0.1869**
Production 39/37(ca) = **0.0006756 ± 0.0000089**
Production 38/37(ca) = **0.0000718 ± 0.0000092**
Production 36/37(ca) = **0.0002663 ± 0.0000004**
Production 40/39(k) = **0.003823 ± 0.000102**
Production 38/39(k) = **0.012031 ± 0.000019**
Production 36/38(cl) = **262.80 ± 1.71**
Scaling Ratio K/Ca = **0.430**
Abundance Ratio 40K/K = **1.1700 ± 0.0100 E-04**
Atomic Weight K = **39.0983 ± 0.0001 g**

Good plateau

Results	40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD	39Ar(k) (%,n)	K/Ca ± 2σ
Age Plateau		2.98198 ± 0.00154	**9.30 ± 0.02**	0.96	73.90	2.98 ± 0.07
		± 0.05%	**± 0.26%**	45%	7	
		Full External Error ± 0.21		2.15	2σ Confidence Limit	
		Analytical Error ± 0.00		1.0000	Error Magnification	
Total Fusion Age		2.98348 ± 0.00129	**9.30 ± 0.02**		17	2.98 ± 0.03
		± 0.04%	**± 0.26%**			
		Full External Error ± 0.21				
		Analytical Error ± 0.00				
Normal Isochron	**6.75 ± 310.61**	2.98800 ± 0.00670	**9.32 ± 0.03**	0.58	73.90	
	########	± 0.22%	**± 0.34%**	72%	7	
		Full External Error ± 0.21		2.26	2σ Confidence Limit	
		Analytical Error ± 0.02		1.0000	Error Magnification	
Inverse Isochron	**12.66 ± 14.81**	2.98787 ± 0.00670	**9.32 ± 0.03**	0.58	73.90	
Clustered Points	**########**	± 0.22%	**± 0.34%**	71%	7	
		Full External Error ± 0.21		2.26	2σ Confidence Limit	
		Analytical Error ± 0.02		1.0000	Error Magnification	
				0%	Spreading Factor	





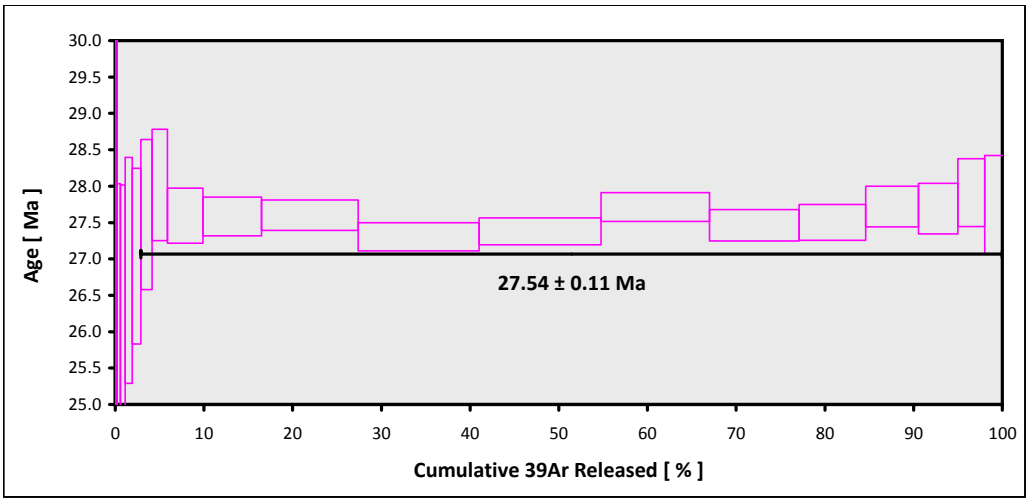
EXP#13D03994 > MV1203-D37-03 > Plagioclase > MV1203 (13-INT-04)
WALVIS RIDGE > OMURA GUYOT
13-OSU-05 > Incremental Heating > Susan Schnur

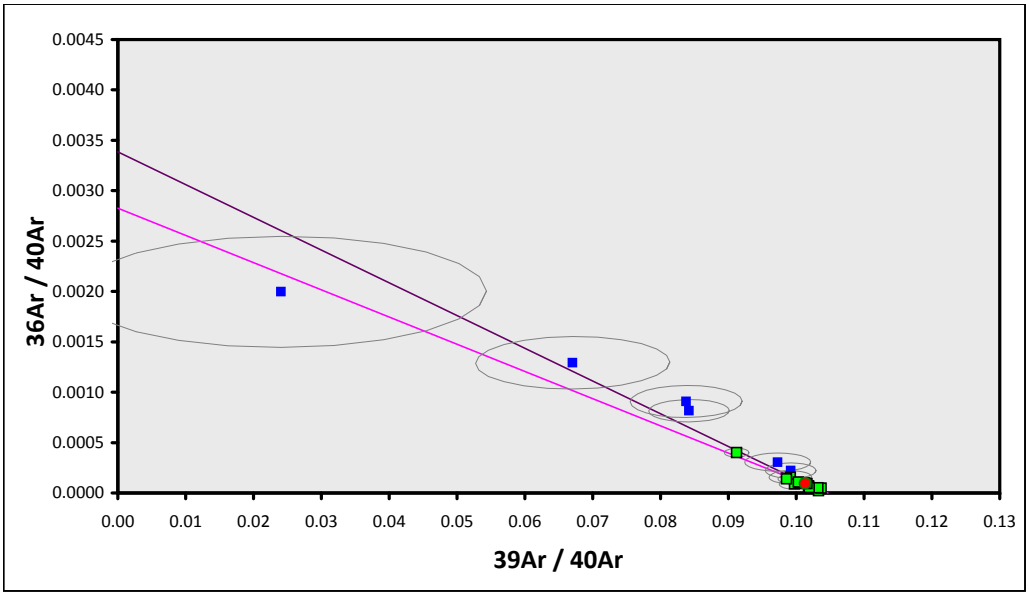
Information on Analysis and Constants Used in Calculations

Project = **MV1203 (13-INT-04)**
Sample = **MV1203-D37-03**
Material = **Plagioclase**
Location = **Omura Guyot**
Region = **Walvis Ridge**
Analyst = **Susan Schnur**
Irradiation = **13-OSU-05**
Position = **X: | Y: | Z/H: 55.6 mm**
FCT-NM Age = **28.201 ± 0.023 Ma**
FCT-NM Reference = **Kuiper et al (2008)**
FCT-NM 40Ar/39Ar Ratio = **9.82798 ± 0.01150**
FCT-NM J-value = **0.00159925 ± 0.00000187**
Air Shot 40Ar/36Ar = **302.7790 ± 0.2846**
Air Shot MDF = **0.99398207 ± 0.00062288 (LIN)**
Experiment Type = **Incremental Heating**
Extraction Method = **Bulk Laser Heating**
Heating = **59 sec**
Isolation = **5.52 min**
Instrument = **ARGUS-VI-D**
Preferred Age = **Plateau Age**
Age Classification = Undefined
IGSN = **IESRS0004**
Rock Class = **Igneous>Volcanic>Mafic**
Lithology = **Basalt**
Lat-Lon = **37°33.0'S - 8°27.1'W**
Age Equations = **Min et al. (2000)**
Negative Intensities = **Allowed**
Collector Calibrations = **40Ar 36Ar**
Decay 40K = **5.530 ± 0.048 E-10 1/a**
Decay 39Ar = **2.940 ± 0.016 E-07 1/h**
Decay 37Ar = **8.230 ± 0.012 E-04 1/h**
Decay 36Cl = **2.257 ± 0.015 E-06 1/a**
Decay 40K(EC,β^+) = **0.580 ± 0.009 E-10 1/a**
Decay 40K(β^-) = **4.950 ± 0.043 E-10 1/a**
Atmospheric 40/36(a) = **295.50**
Atmospheric 38/36(a) = **0.1869**
Production 39/37(ca) = **0.0006756 ± 0.0000089**
Production 38/37(ca) = **0.0000718 ± 0.0000092**
Production 36/37(ca) = **0.0002663 ± 0.0000004**
Production 40/39(k) = **0.003823 ± 0.000102**
Production 38/39(k) = **0.012031 ± 0.000019**
Production 36/38(cl) = **262.80 ± 1.71**
Scaling Ratio K/Ca = **0.430**
Abundance Ratio 40K/K = **1.1700 ± 0.0100 E-04**
Atomic Weight K = **39.0983 ± 0.0001 g**

Good plateau

Results	40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD	39Ar(k) (%,n)	K/Ca ± 2σ
Age Plateau		9.59589 ± 0.03130	**27.54 ± 0.11**	1.54	97.10	0.0078 ± 0.0001
		± 0.33%	**± 0.40%**	9%	14	
		Full External Error ± 0.63		1.78	2σ Confidence Limit	
		Analytical Error ± 0.09		1.2412	Error Magnification	
Total Fusion Age		9.59069 ± 0.02699	**27.53 ± 0.10**		20	0.0079 ± 0.0000
		± 0.28%	**± 0.36%**			
		Full External Error ± 0.63				
		Analytical Error ± 0.08				
Normal Isochron	**283.73 ± 81.04**	9.59535 ± 0.06430	**27.54 ± 0.19**	2.52	97.10	
Error Chron	**± 28.56%**	± 0.67%	**± 0.70%**	0%	14	
		Full External Error ± 0.65		1.82	2σ Confidence Limit	
		Analytical Error ± 0.18		1.5861	Error Magnification	
Inverse Isochron	**353.69 ± 62.90**	9.55484 ± 0.05530	**27.42 ± 0.17**	1.24	97.10	
	± 17.78%	± 0.58%	**± 0.62%**	25%	14	
		Full External Error ± 0.64		1.82	2σ Confidence Limit	
		Analytical Error ± 0.16		1.1119	Error Magnification	
				12%	Spreading Factor	





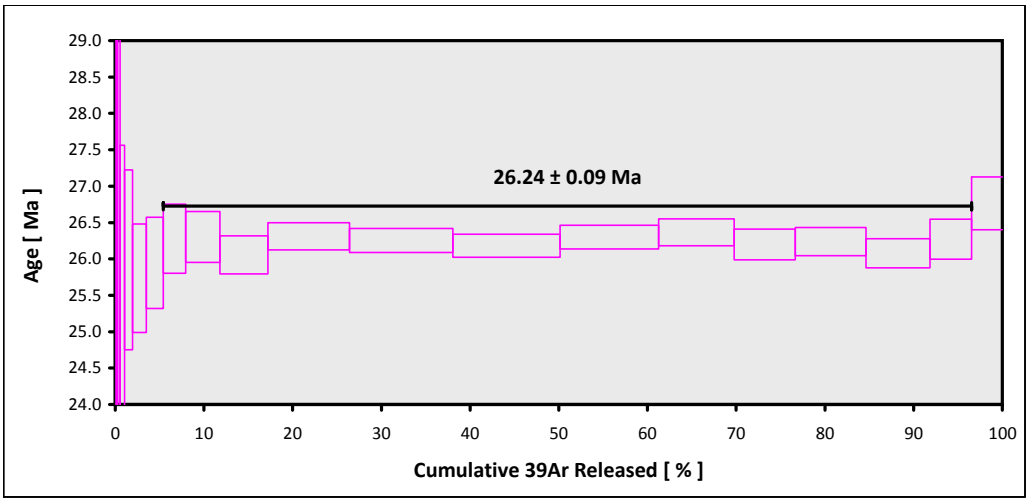
EXP#13D04032 > MV1203-D38-01 > Plagioclase > MV1203 (13-INT-04)
WALVIS RIDGE > HECTOR GUYOT
13-OSU-05 > Incremental Heating > Susan Schnur

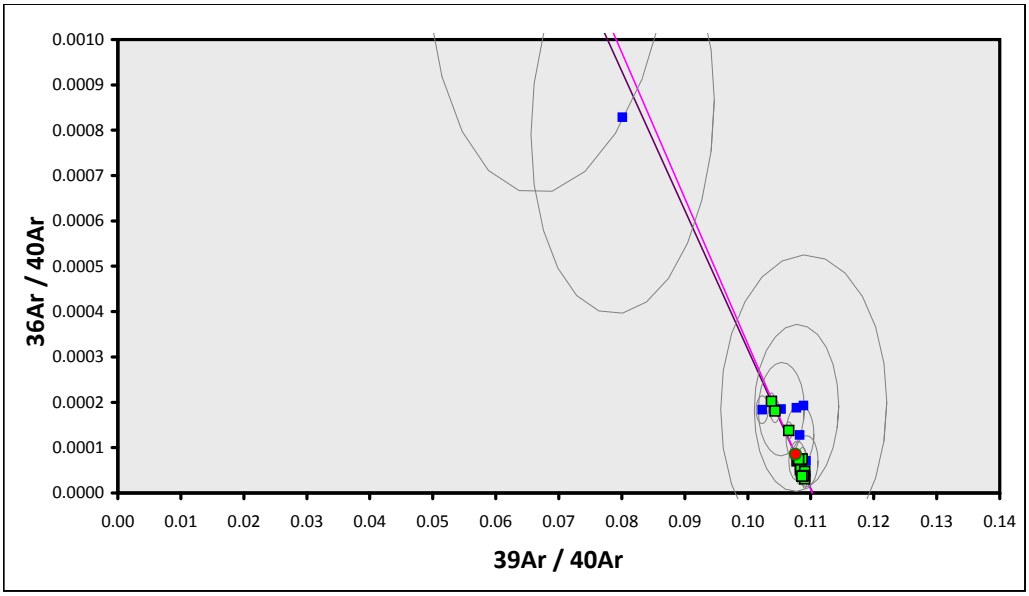
Information on Analysis and Constants Used in Calculations

Project = **MV1203 (13-INT-04)**
Sample = **MV1203-D38-01**
Material = **Plagioclase**
Location = **Hector Guyot**
Region = **Walvis Ridge**
Analyst = **Susan Schnur**
Irradiation = **13-OSU-05**
Position = **X: | Y: | Z/H: 53 mm**
FCT-NM Age = **28.201 ± 0.023 Ma**
FCT-NM Reference = **Kuiper et al (2008)**
FCT-NM 40Ar/39Ar Ratio = **9.74538 ± 0.01150**
FCT-NM J-value = **0.00161280 ± 0.00000190**
Air Shot 40Ar/36Ar = **302.7470 ± 0.2906**
Air Shot MDF = **0.99400790 ± 0.00062477 (LIN)**
Experiment Type = **Incremental Heating**
Extraction Method = **Bulk Laser Heating**
Heating = **60 sec**
Isolation = **5.52 min**
Instrument = **ARGUS-VI-D**
Preferred Age = **Plateau Age**
Age Classification = **Eruption Age**
IGSN = **IESRS0005**
Rock Class = **Igneous>Volcanic>Mafic**
Lithology = **Basalt**
Lat-Lon = **37°47.2'S - 8°52.3'W**
Age Equations = **Min et al. (2000)**
Negative Intensities = **Allowed**
Collector Calibrations = **40Ar 36Ar**
Decay 40K = **5.530 ± 0.048 E-10 1/a**
Decay 39Ar = **2.940 ± 0.016 E-07 1/h**
Decay 37Ar = **8.230 ± 0.012 E-04 1/h**
Decay 36Cl = **2.257 ± 0.015 E-06 1/a**
Decay 40K(EC,β^+) = **0.580 ± 0.009 E-10 1/a**
Decay 40K(β^-) = **4.950 ± 0.043 E-10 1/a**
Atmospheric 40/36(a) = **295.50**
Atmospheric 38/36(a) = **0.1869**
Production 39/37(ca) = **0.0006756 ± 0.0000089**
Production 38/37(ca) = **0.0000718 ± 0.0000092**
Production 36/37(ca) = **0.0002663 ± 0.0000004**
Production 40/39(k) = **0.003823 ± 0.000102**
Production 38/39(k) = **0.012031 ± 0.000019**
Production 36/38(cl) = **262.80 ± 1.71**
Scaling Ratio K/Ca = **0.430**
Abundance Ratio 40K/K = **1.1700 ± 0.0100 E-04**
Atomic Weight K = **39.0983 ± 0.0001 g**

Good plateau

Results	40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD	39Ar(k) (%,n)	K/Ca ± 2σ
Age Plateau		9.06239 ± 0.02050 (± 0.23%)	**26.24 ± 0.09 (± 0.32%)**	0.78 66%	91.13 12	0.0113 ± 0.0007
		Full External Error ± 0.60		1.85	2σ Confidence Limit	
		Analytical Error ± 0.06		1.0000	Error Magnification	
Total Fusion Age		9.06096 ± 0.02204 (± 0.24%)	**26.23 ± 0.09 (± 0.34%)**		20	0.0115 ± 0.0000
		Full External Error ± 0.60				
		Analytical Error ± 0.06				
Normal Isochron	**248.37 ± 41.87 (± 16.86%)**	9.09981 ± 0.03454 (± 0.38%)	**26.35 ± 0.12 (± 0.44%)**	1.45 15%	91.13 12	
		Full External Error ± 0.60		1.89	2σ Confidence Limit	
		Analytical Error ± 0.10		1.2058	Error Magnification	
Inverse Isochron Clustered Points	**282.30 ± 36.66 (± 12.99%)**	9.07170 ± 0.03222 (± 0.36%)	**26.27 ± 0.11 (± 0.42%)**	0.81 62%	91.13 12	
		Full External Error ± 0.60		1.89	2σ Confidence Limit	
		Analytical Error ± 0.09		1.0000	Error Magnification	
				5%	Spreading Factor	





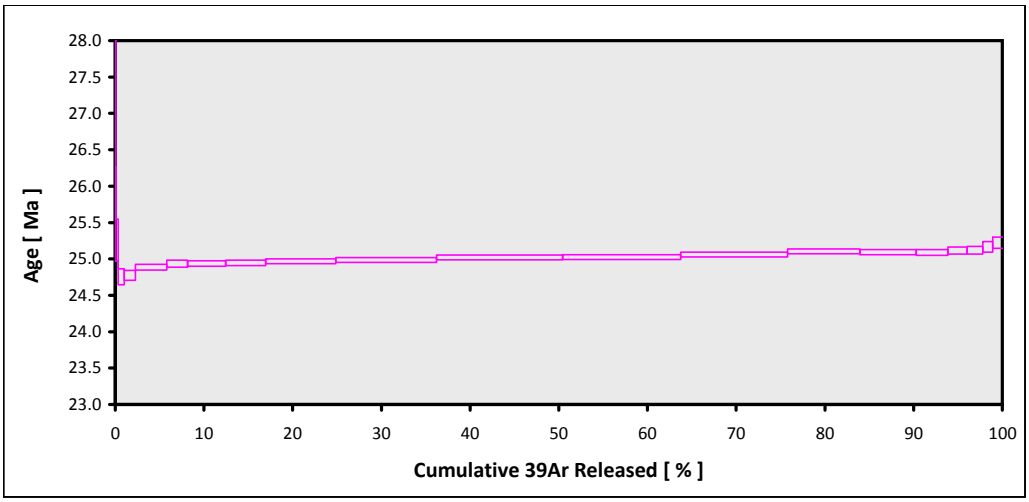
EXP#13D04060 > MV1203-D40-25 > Plagioclase > MV1203 (13-INT-04)
WALVIS RIDGE > DUSKY GUYOT
13-OSU-05 > Incremental Heating > Susan Schnur

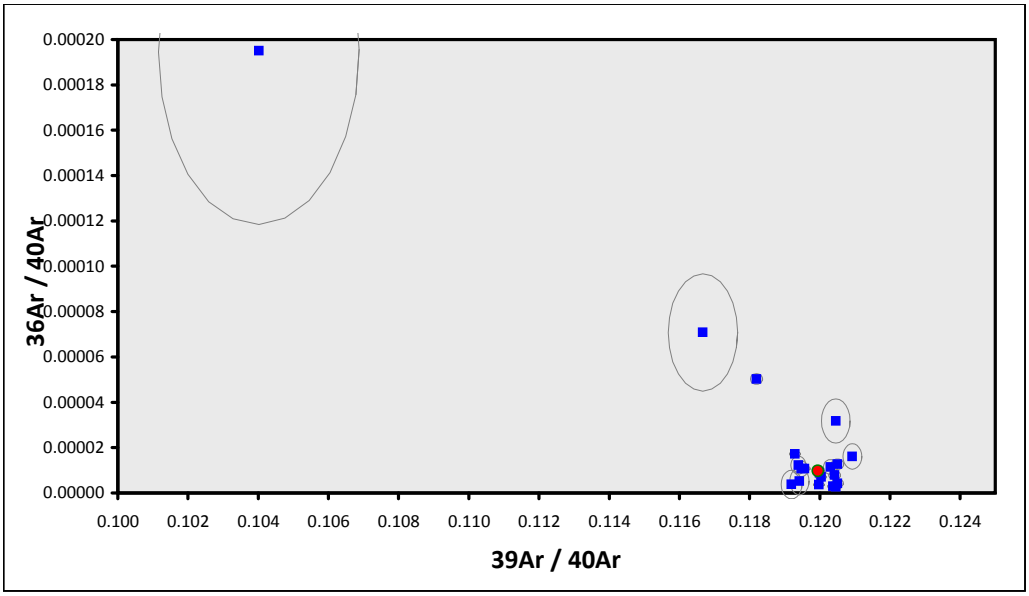
Information on Analysis and Constants Used in Calculations

Project = **MV1203 (13-INT-04)**
Sample = **MV1203-D40-25**
Material = **Plagioclase**
Location = **Dusky Guyot**
Region = **Walvis Ridge**
Analyst = **Susan Schnur**
Irradiation = **13-OSU-05**
Position = **X: | Y: | Z/H: 39.8 mm**
FCT-NM Age = **28.201 ± 0.023 Ma**
FCT-NM Reference = **Kuiper et al (2008)**
FCT-NM 40Ar/39Ar Ratio = **9.37716 ± 0.01153**
FCT-NM J-value = **0.00167614 ± 0.00000206**
Air Shot 40Ar/36Ar = **302.7480 ± 0.2906**
Air Shot MDF = **0.99400709 ± 0.00062476 (LIN)**
Experiment Type = **Incremental Heating**
Extraction Method = **Bulk Laser Heating**
Heating = **60 sec**
Isolation = **5.52 min**
Instrument = **ARGUS-VI-D**
Preferred Age = Undefined
Age Classification = Undefined
IGSN = **IESRS0006**
Rock Class = **Igneous>Volcanic>Mafic**
Lithology = **Trachyte**
Lat-Lon = **37°55.1'S - 6°53.2'W**
Age Equations = **Min et al. (2000)**
Negative Intensities = **Allowed**
Collector Calibrations = **40Ar 36Ar**
Decay 40K = **5.530 ± 0.048 E-10 1/a**
Decay 39Ar = **2.940 ± 0.016 E-07 1/h**
Decay 37Ar = **8.230 ± 0.012 E-04 1/h**
Decay 36Cl = **2.257 ± 0.015 E-06 1/a**
Decay 40K(EC,β^+) = **0.580 ± 0.009 E-10 1/a**
Decay 40K(β^-) = **4.950 ± 0.043 E-10 1/a**
Atmospheric 40/36(a) = **295.50**
Atmospheric 38/36(a) = **0.1869**
Production 39/37(ca) = **0.0006756 ± 0.0000089**
Production 38/37(ca) = **0.0000718 ± 0.0000092**
Production 36/37(ca) = **0.0002663 ± 0.0000004**
Production 40/39(k) = **0.003823 ± 0.000102**
Production 38/39(k) = **0.012031 ± 0.000019**
Production 36/38(cl) = **262.80 ± 1.71**
Scaling Ratio K/Ca = **0.430**
Abundance Ratio 40K/K = **1.1700 ± 0.0100 E-04**
Atomic Weight K = **39.0983 ± 0.0001 g**

Questionable, plateau slants upwards, excess argon.

Results	40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD	39Ar(k) (%,n)	K/Ca ± 2σ
Age Plateau						
Cannot Calculate						
Total Fusion Age		8.31309 ± 0.00345 ± 0.04%	**25.02 ± 0.06 ± 0.25%**		20	0.295 ± 0.001
			Full External Error ± 0.57			
			Analytical Error ± 0.01			
Normal Isochron						
Cannot Calculate						
Inverse Isochron						
Cannot Calculate						





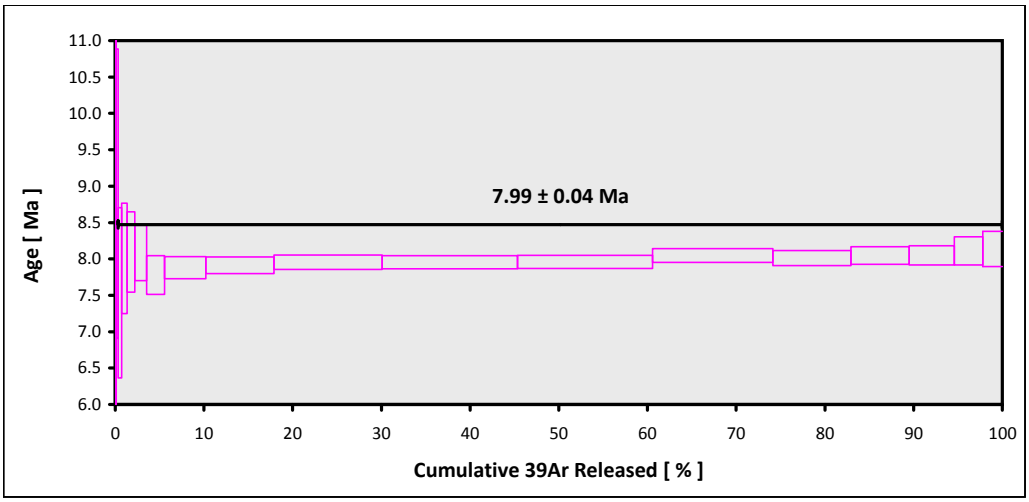
EXP#13D04088 > MV1203-D45-01 > Plagioclase > MV1203 (13-INT-04)
WALVIS RIDGE > GREY SEAMOUNT
13-OSU-05 > Incremental Heating > Susan Schnur

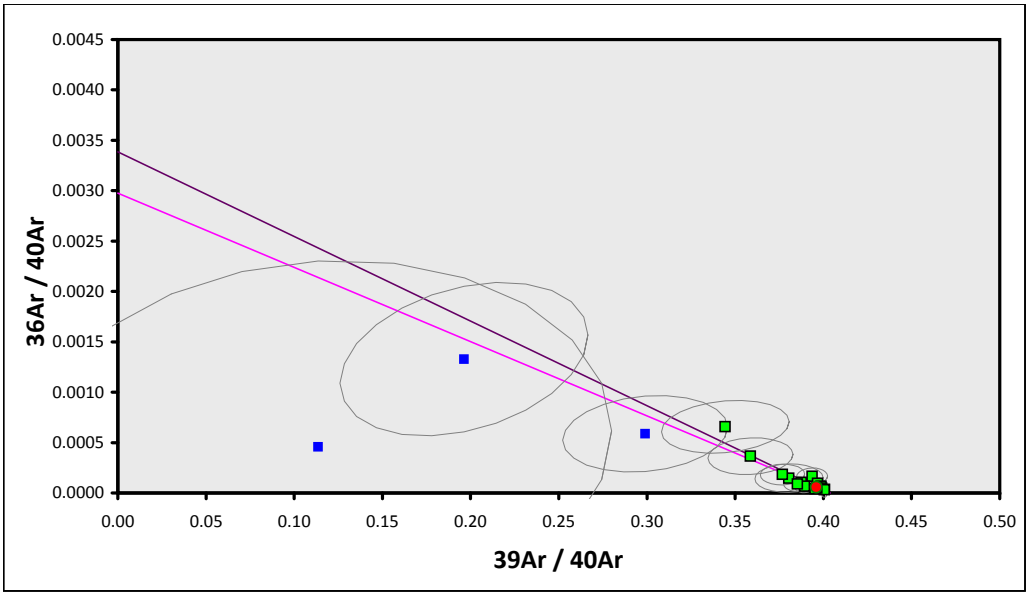
Information on Analysis and Constants Used in Calculations

Project = **MV1203 (13-INT-04)**
Sample = **MV1203-D45-01**
Material = **Plagioclase**
Location = **Grey Seamount**
Region = **Walvis Ridge**
Analyst = **Susan Schnur**
Irradiation = **13-OSU-05**
Position = **X: | Y: | Z/H: 3.97 mm**
FCT-NM Age = **28.201 ± 0.023 Ma**
FCT-NM Reference = **Kuiper et al (2008)**
FCT-NM 40Ar/39Ar Ratio = **8.80841 ± 0.01154**
FCT-NM J-value = **0.00178436 ± 0.00000234**
Air Shot 40Ar/36Ar = **302.7480 ± 0.2906**
Air Shot MDF = **0.99400709 ± 0.00062476 (LIN)**
Experiment Type = **Incremental Heating**
Extraction Method = **Bulk Laser Heating**
Heating = **60 sec**
Isolation = **5.52 min**
Instrument = **ARGUS-VI-D**
Preferred Age = **Plateau Age**
Age Classification = **Eruption Age**
IGSN = **IESRS0007**
Rock Class = **Igneous>Volcanic>Mafic**
Lithology = **Trachybasalt**
Lat-Lon = **40°13.0'S - 12°19.3'W**
Age Equations = **Min et al. (2000)**
Negative Intensities = **Allowed**
Collector Calibrations = **40Ar 36Ar**
Decay 40K = **5.530 ± 0.048 E-10 1/a**
Decay 39Ar = **2.940 ± 0.016 E-07 1/h**
Decay 37Ar = **8.230 ± 0.012 E-04 1/h**
Decay 36Cl = **2.257 ± 0.015 E-06 1/a**
Decay 40K(EC,β^+) = **0.580 ± 0.009 E-10 1/a**
Decay 40K(β^-) = **4.950 ± 0.043 E-10 1/a**
Atmospheric 40/36(a) = **295.50**
Atmospheric 38/36(a) = **0.1869**
Production 39/37(ca) = **0.0006756 ± 0.0000089**
Production 38/37(ca) = **0.0000718 ± 0.0000092**
Production 36/37(ca) = **0.0002663 ± 0.0000004**
Production 40/39(k) = **0.003823 ± 0.000102**
Production 38/39(k) = **0.012031 ± 0.000019**
Production 36/38(cl) = **262.80 ± 1.71**
Scaling Ratio K/Ca = **0.430**
Abundance Ratio 40K/K = **1.1700 ± 0.0100 E-04**
Atomic Weight K = **39.0983 ± 0.0001 g**

Good plateau

Results	40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD	39Ar(k) (%,n)	K/Ca ± 2σ
Age Plateau		2.48072 ± 0.01065	**7.99 ± 0.04**	1.02	99.67	0.0169 ± 0.0004
		± 0.43%	**± 0.50%**	43%	16	
		Full External Error ± 0.18		1.73	2σ Confidence Limit	
		Analytical Error ± 0.03		1.0083	Error Magnification	
Total Fusion Age		2.48186 ± 0.01103	**7.99 ± 0.04**		19	0.0168 ± 0.0001
		± 0.44%	**± 0.51%**			
		Full External Error ± 0.18				
		Analytical Error ± 0.04				
Normal Isochron	**94.76 ± 112.63**	2.49792 ± 0.01368	**8.04 ± 0.05**	2.48	99.67	
Error Chron	**######## ± 34.34%**	± 0.55%	**± 0.61%**	0%	16	
		Full External Error ± 0.19		1.76	2σ Confidence Limit	
		Analytical Error ± 0.04		1.5750	Error Magnification	
Inverse Isochron	**336.23 ± 115.45**	2.47574 ± 0.01811	**7.97 ± 0.06**	1.04	99.67	
	± 34.34%	± 0.73%	**± 0.78%**	41%	16	
		Full External Error ± 0.19		1.76	2σ Confidence Limit	
		Analytical Error ± 0.06		1.0216	Error Magnification	
				14%	Spreading Factor	





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

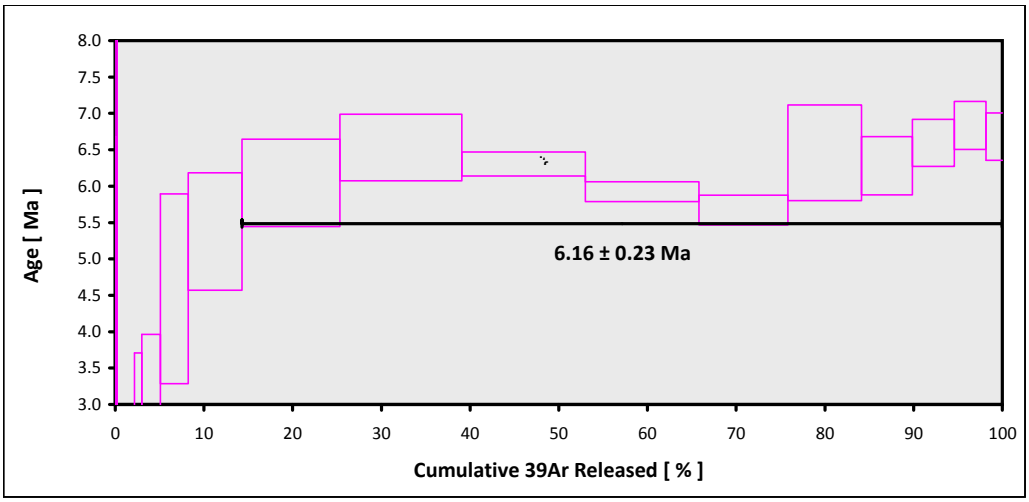
EXP#13D04126 > MV1203-D44-07 (212-300) > Plagioclase > MV1203 (13-INT-04)
WALVIS RIDGE > BLUE SEAMOUNT
13-OSU-05 > Incremental Heating > Susan Schnur

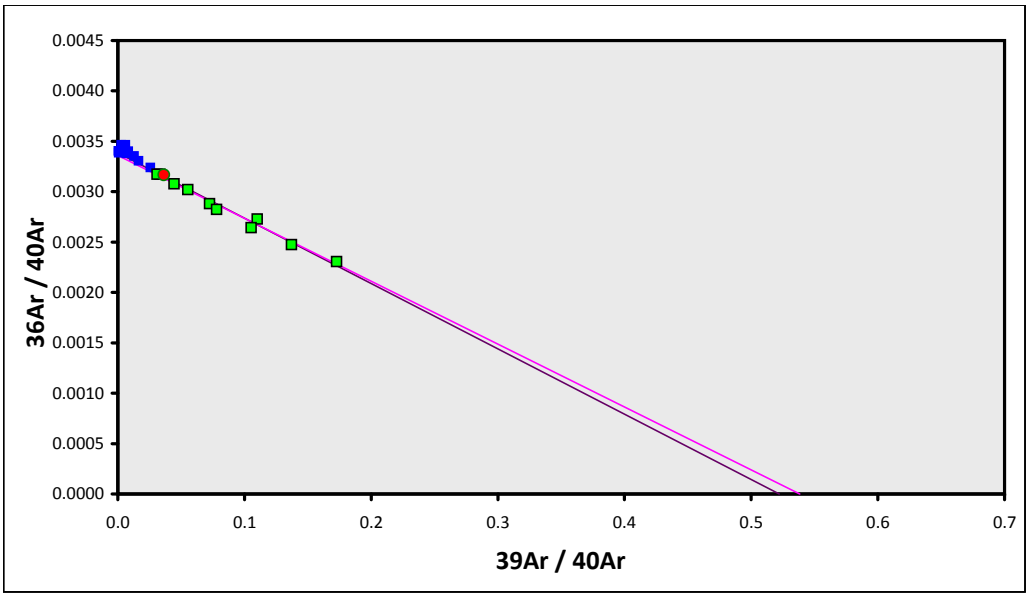
Information on Analysis and Constants Used in Calculations

Project = **MV1203 (13-INT-04)**
Sample = **MV1203-D44-07 (212-300)**
Material = **Plagioclase**
Location = **Blue Seamount**
Region = **Walvis Ridge**
Analyst = **Susan Schnur**
Irradiation = **13-OSU-05**
Position = **X: | Y: | Z/H: 6.72 mm**
FCT-NM Age = **28.201 ± 0.023 Ma**
FCT-NM Reference = **Kuiper et al (2008)**
FCT-NM 40Ar/39Ar Ratio = **8.82975 ± 0.01157**
FCT-NM J-value = **0.00178005 ± 0.00000233**
Air Shot 40Ar/36Ar = **302.7510 ± 0.2846**
Air Shot MDF = **0.99400467 ± 0.00062294 (LIN)**
Experiment Type = **Incremental Heating**
Extraction Method = **Bulk Laser Heating**
Heating = **70 sec**
Isolation = **5.52 min**
Instrument = **ARGUS-VI-D**
Preferred Age = **Plateau Age**
Age Classification = **Eruption Age**
IGSN = **IESRS0008**
Rock Class = **Igneous>Volcanic>Mafic**
Lithology = **Trachybasalt**
Lat-Lon = **40°17.2'S - 13°13.3'W**
Age Equations = **Min et al. (2000)**
Negative Intensities = **Allowed**
Collector Calibrations = **40Ar 36Ar**
Decay 40K = **5.530 ± 0.048 E-10 1/a**
Decay 39Ar = **2.940 ± 0.016 E-07 1/h**
Decay 37Ar = **8.230 ± 0.012 E-04 1/h**
Decay 36Cl = **2.257 ± 0.015 E-06 1/a**
Decay 40K(EC,β^+) = **0.580 ± 0.009 E-10 1/a**
Decay 40K(β^-) = **4.950 ± 0.043 E-10 1/a**
Atmospheric 40/36(a) = **295.50**
Atmospheric 38/36(a) = **0.1869**
Production 39/37(ca) = **0.0006756 ± 0.0000089**
Production 38/37(ca) = **0.0000718 ± 0.0000092**
Production 36/37(ca) = **0.0002663 ± 0.0000004**
Production 40/39(k) = **0.003823 ± 0.000102**
Production 38/39(k) = **0.012031 ± 0.000019**
Production 36/38(cl) = **262.80 ± 1.71**
Scaling Ratio K/Ca = **0.430**
Abundance Ratio 40K/K = **1.1700 ± 0.0100 E-04**
Atomic Weight K = **39.0983 ± 0.0001 g**

Bumpy, high MSWD, but the 40/36 is Good plateau.
Combine with 106-212 experiment.

Results	40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD	39Ar(k) (%,n)	K/Ca ± 2σ
Age Plateau		1.91556 ± 0.07193	**6.16 ± 0.23**	8.43	85.70	0.0214 ± 0.0002
Error Mean		± 3.76%	**± 3.76%**	0%	10	
			Full External Error ± 0.27	1.94	2σ Confidence Limit	
			Analytical Error ± 0.23	2.9032	Error Magnification	
Total Fusion Age		1.76747 ± 0.04777	**5.68 ± 0.15**		20	0.0213 ± 0.0001
		± 2.70%	**± 2.71%**			
			Full External Error ± 0.20			
			Analytical Error ± 0.15			
Normal Isochron	**297.76 ± 3.80**	1.85372 ± 0.12077	**5.96 ± 0.39**	8.04	85.70	
Error Chron	**± 1.28%**	± 6.52%	**± 6.51%**	0%	10	
			Full External Error ± 0.41	2.00	2σ Confidence Limit	
			Analytical Error ± 0.39	2.8347	Error Magnification	
Inverse Isochron	**297.76 ± 3.82**	1.85734 ± 0.12072	**5.97 ± 0.39**	8.06	85.70	
Error Chron	**± 1.28%**	± 6.50%	**± 6.49%**	0%	10	
			Full External Error ± 0.41	2.00	2σ Confidence Limit	
			Analytical Error ± 0.39	2.8385	Error Magnification	
				26%	Spreading Factor	





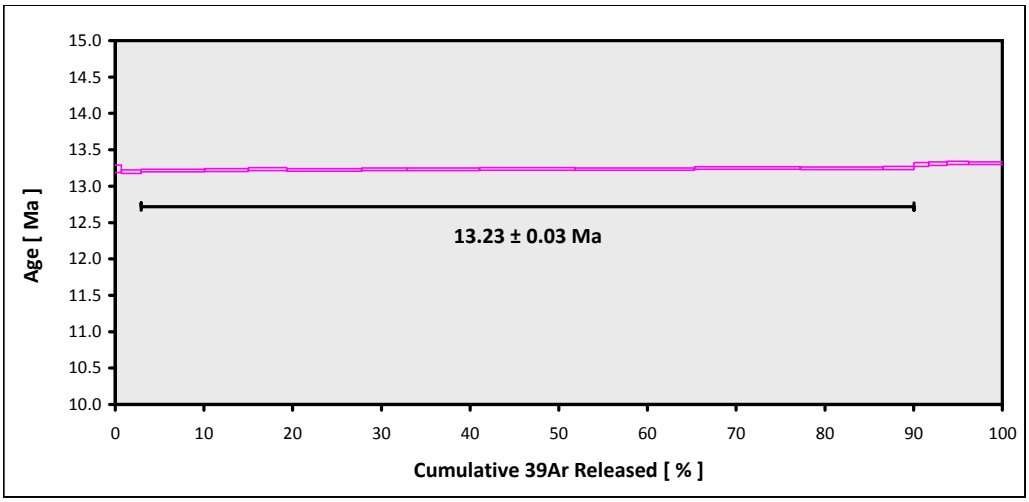
EXP#13D04154 > MV1203-D43A-01 > K Feldspar > MV1203 (13-INT-04)
WALVIS RIDGE > CRAWFORD GUYOT
13-OSU-05 > Incremental Heating > Susan Schnur

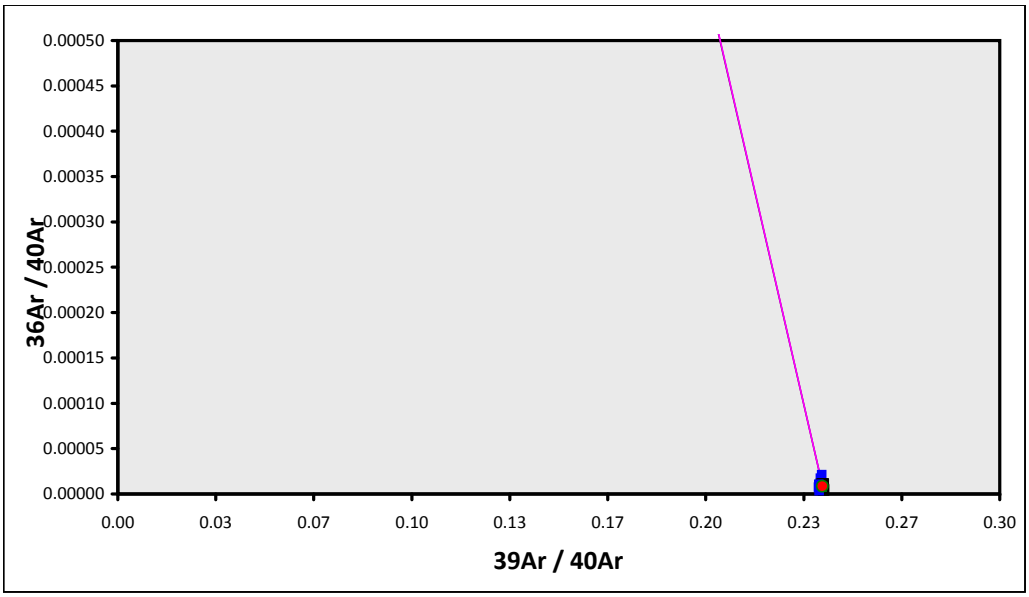
Information on Analysis and Constants Used in Calculations

Project = **MV1203 (13-INT-04)**
Sample = **MV1203-D43A-01**
Material = **K Feldspar**
Location = **Crawford Guyot**
Region = **Walvis Ridge**
Analyst = **Susan Schnur**
Irradiation = **13-OSU-05**
Position = **X: | Y: | Z/H: 13.75 mm**
FCT-NM Age = **28.201 ± 0.023 Ma**
FCT-NM Reference = **Kuiper et al (2008)**
FCT-NM 40Ar/39Ar Ratio = **8.90119 ± 0.01157**
FCT-NM J-value = **0.00176576 ± 0.00000230**
Air Shot 40Ar/36Ar = **302.7520 ± 0.2846**
Air Shot MDF = **0.99400386 ± 0.00062294 (LIN)**
Experiment Type = **Incremental Heating**
Extraction Method = **Bulk Laser Heating**
Heating = **60 sec**
Isolation = **5.52 min**
Instrument = **ARGUS-VI-D**
Preferred Age = **Plateau Age**
Age Classification = **Eruption Age**
IGSN = **IESRS0009**
Rock Class = **Igneous>Volcanic>Mafic**
Lithology = **Trachyte**
Lat-Lon = **38°46.3'S - 10°41.4'W**
Age Equations = **Min et al. (2000)**
Negative Intensities = **Allowed**
Collector Calibrations = **40Ar 36Ar**
Decay 40K = **5.530 ± 0.048 E-10 1/a**
Decay 39Ar = **2.940 ± 0.016 E-07 1/h**
Decay 37Ar = **8.230 ± 0.012 E-04 1/h**
Decay 36Cl = **2.257 ± 0.015 E-06 1/a**
Decay 40K(EC,β^+) = **0.580 ± 0.009 E-10 1/a**
Decay 40K(β^-) = **4.950 ± 0.043 E-10 1/a**
Atmospheric 40/36(a) = **295.50**
Atmospheric 38/36(a) = **0.1869**
Production 39/37(ca) = **0.0006756 ± 0.0000089**
Production 38/37(ca) = **0.0000718 ± 0.0000092**
Production 36/37(ca) = **0.0002663 ± 0.0000004**
Production 40/39(k) = **0.003823 ± 0.000102**
Production 38/39(k) = **0.012031 ± 0.000019**
Production 36/38(cl) = **262.80 ± 1.71**
Scaling Ratio K/Ca = **0.430**
Abundance Ratio 40K/K = **1.1700 ± 0.0100 E-04**
Atomic Weight K = **39.0983 ± 0.0001 g**

Good plateau

Results	40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD	39Ar(k) (%,n)	K/Ca ± 2σ
Age Plateau		4.15987 ± 0.00219	**13.23 ± 0.03**	1.65	87.11	3.02 ± 0.21
		± 0.05%	**± 0.26%**	9%	11	
		Full External Error	± 0.30	1.89	2σ Confidence Limit	
		Analytical Error	± 0.01	1.2854	Error Magnification	
Total Fusion Age		4.16237 ± 0.00161	**13.24 ± 0.03**		17	3.03 ± 0.04
		± 0.04%	**± 0.26%**			
		Full External Error	± 0.30			
		Analytical Error	± 0.01			
Normal Isochron	**303.49 ± 228.85**	4.15937 ± 0.00808	**13.23 ± 0.04**	1.82	87.11	
	± 75.40%	± 0.19%	**± 0.32%**	6%	11	
		Full External Error	± 0.30	1.94	2σ Confidence Limit	
		Analytical Error	± 0.03	1.3495	Error Magnification	
Inverse Isochron	**294.80 ± 154.49**	4.15990 ± 0.00811	**13.23 ± 0.04**	1.84	87.11	
Clustered Points	**± 52.41%**	± 0.19%	**± 0.32%**	6%	11	
		Full External Error	± 0.30	1.94	2σ Confidence Limit	
		Analytical Error	± 0.03	1.3550	Error Magnification	
				0%	Spreading Factor	





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

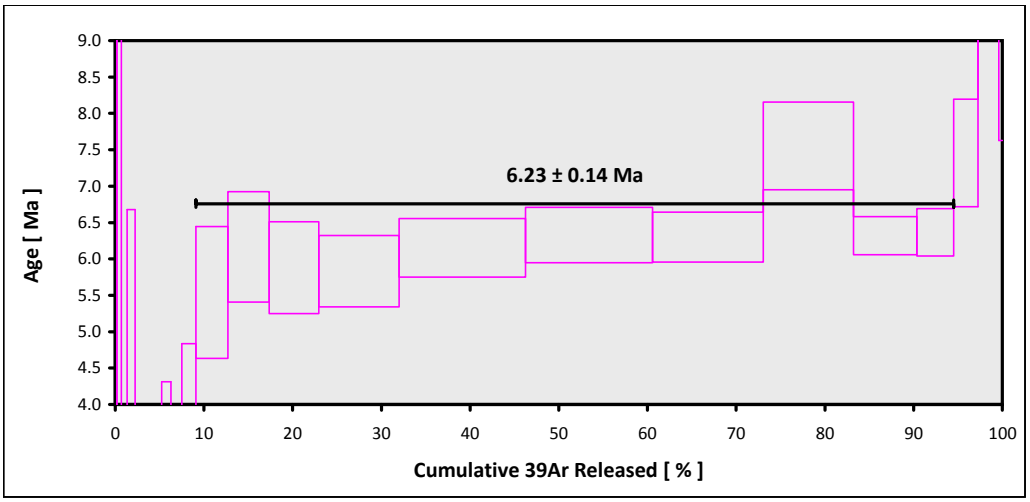
EXP#13D04188 > MV1203-D44-07 (106-212) > Plagioclase > MV1203 (13-INT-04)
WALVIS RIDGE > BLUE SEAMOUNT
13-OSU-05 > Incremental Heating > Susan Schnur

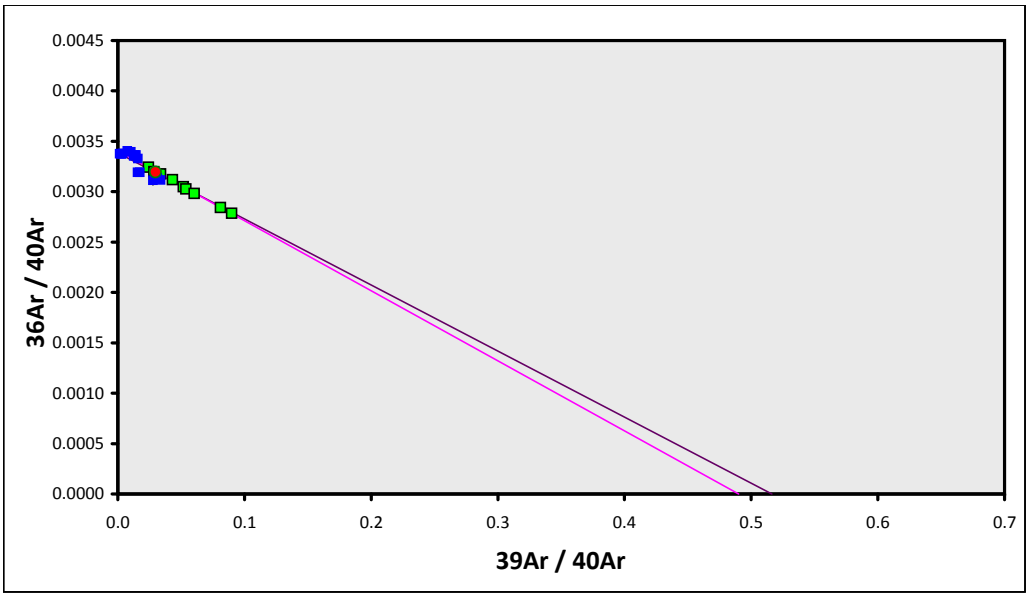
Information on Analysis and Constants Used in Calculations

Project = **MV1203 (13-INT-04)**
Sample = **MV1203-D44-07 (106-212)**
Material = **Plagioclase**
Location = **Blue Seamount**
Region = **Walvis Ridge**
Analyst = **Susan Schnur**
Irradiation = **13-OSU-05**
Position = **X: | Y: | Z/H: 5.69 mm**
FCT-NM Age = **28.201 ± 0.023 Ma**
FCT-NM Reference = **Kuiper et al (2008)**
FCT-NM 40Ar/39Ar Ratio = **8.82132 ± 0.01156**
FCT-NM J-value = **0.00178175 ± 0.00000233**
Air Shot 40Ar/36Ar = **302.7540 ± 0.2846**
Air Shot MDF = **0.99400225 ± 0.00062293 (LIN)**
Experiment Type = **Incremental Heating**
Extraction Method = **Bulk Laser Heating**
Heating = **60 sec**
Isolation = **5.52 min**
Instrument = **ARGUS-VI-D**
Preferred Age = **Plateau Age**
Age Classification = **Eruption Age**
IGSN = **IESRS0010**
Rock Class = **Igneous>Volcanic>Mafic**
Lithology = **Trachybasalt**
Lat-Lon = **40°17.2'S - 13°13.3'W**
Age Equations = **Min et al. (2000)**
Negative Intensities = **Allowed**
Collector Calibrations = **40Ar 36Ar**
Decay 40K = **5.530 ± 0.048 E-10 1/a**
Decay 39Ar = **2.940 ± 0.016 E-07 1/h**
Decay 37Ar = **8.230 ± 0.012 E-04 1/h**
Decay 36Cl = **2.257 ± 0.015 E-06 1/a**
Decay 40K(EC,β^+) = **0.580 ± 0.009 E-10 1/a**
Decay 40K(β^-) = **4.950 ± 0.043 E-10 1/a**
Atmospheric 40/36(a) = **295.50**
Atmospheric 38/36(a) = **0.1869**
Production 39/37(ca) = **0.0006756 ± 0.0000089**
Production 38/37(ca) = **0.0000718 ± 0.0000092**
Production 36/37(ca) = **0.0002663 ± 0.0000004**
Production 40/39(k) = **0.003823 ± 0.000102**
Production 38/39(k) = **0.012031 ± 0.000019**
Production 36/38(cl) = **262.80 ± 1.71**
Scaling Ratio K/Ca = **0.430**
Abundance Ratio 40K/K = **1.1700 ± 0.0100 E-04**
Atomic Weight K = **39.0983 ± 0.0001 g**

Concordant with 212-300 fraction, but cleaner. Exclude bumps for a Good plateau plateau.

Results	40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD	39Ar(k) (%,n)	K/Ca ± 2σ
Age Plateau		1.93642 ± 0.04187	**6.23 ± 0.14**	1.00	75.23	0.0189 ± 0.0002
		± 2.16%	**± 2.17%**	44%	9	
		Full External Error ± 0.20		2.00	2σ Confidence Limit	
		Analytical Error ± 0.13		1.0000	Error Magnification	
Total Fusion Age		1.87615 ± 0.05435	**6.03 ± 0.18**		23	0.0190 ± 0.0001
		± 2.90%	**± 2.90%**			
		Full External Error ± 0.22				
		Analytical Error ± 0.17				
Normal Isochron	**293.47 ± 1.78**	2.04094 ± 0.10056	**6.56 ± 0.32**	0.41	75.23	
	± 0.61%	± 4.93%	**± 4.93%**	90%	9	
		Full External Error ± 0.36		2.07	2σ Confidence Limit	
		Analytical Error ± 0.32		1.0000	Error Magnification	
Inverse Isochron	**293.47 ± 1.78**	2.04078 ± 0.10048	**6.56 ± 0.32**	0.41	75.23	
	± 0.61%	± 4.92%	**± 4.92%**	90%	9	
		Full External Error ± 0.36		2.07	2σ Confidence Limit	
		Analytical Error ± 0.32		1.0000	Error Magnification	
				13%	Spreading Factor	





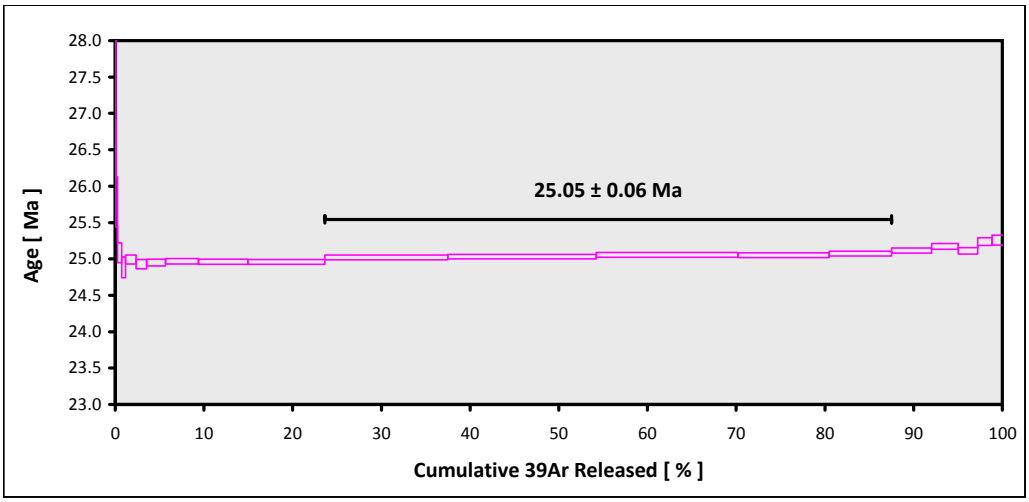
EXP#13D04220 > MV1203-D40-02 > Plagioclase > MV1203 (13-INT-04)
WALVIS RIDGE > DUSKY GUYOT
13-OSU-05 > Incremental Heating > Susan Schnur

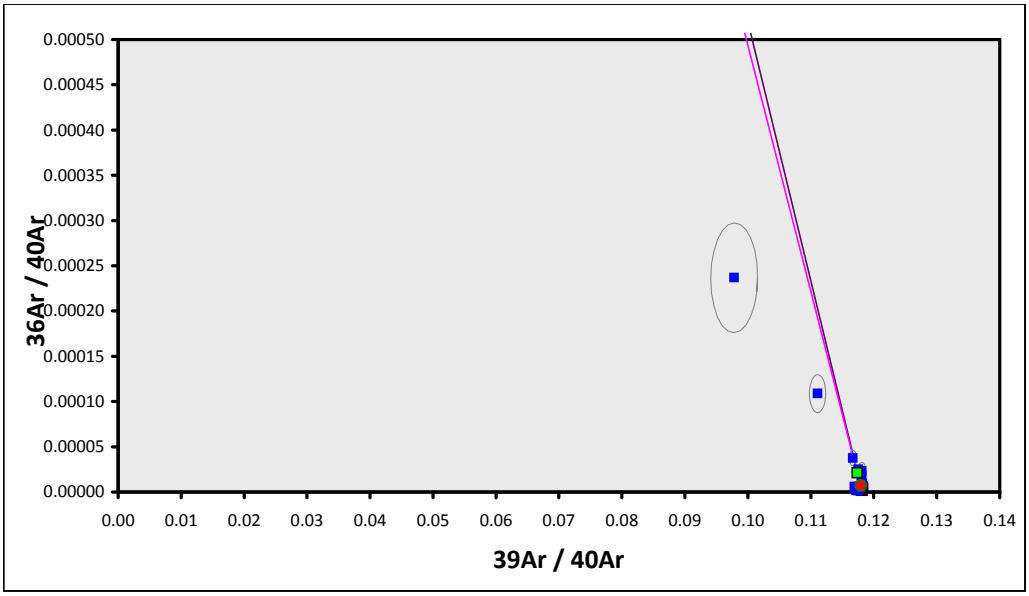
Information on Analysis and Constants Used in Calculations

Project = **MV1203 (13-INT-04)**
Sample = **MV1203-D40-02**
Material = **Plagioclase**
Location = **Dusky Guyot**
Region = **Walvis Ridge**
Analyst = **Susan Schnur**
Irradiation = **13-OSU-05**
Position = **X: | Y: | Z/H: 45.95 mm**
FCT-NM Age = **28.201 ± 0.023 Ma**
FCT-NM Reference = **Kuiper et al (2008)**
FCT-NM 40Ar/39Ar Ratio = **9.53809 ± 0.01154**
FCT-NM J-value = **0.00164786 ± 0.00000199**
Air Shot 40Ar/36Ar = **302.7550 ± 0.2846**
Air Shot MDF = **0.99400144 ± 0.00062293 (LIN)**
Experiment Type = **Incremental Heating**
Extraction Method = **Bulk Laser Heating**
Heating = **60 sec**
Isolation = **5.52 min**
Instrument = **ARGUS-VI-D**
Preferred Age = **Plateau Age**
Age Classification = **Eruption Age**
IGSN = **IESRS0011**
Rock Class = **Igneous>Volcanic>Mafic**
Lithology = **Trachyandesite**
Lat-Lon = **37°55.1'S - 6°53.2'W**
Age Equations = **Min et al. (2000)**
Negative Intensities = **Allowed**
Collector Calibrations = **40Ar 36Ar**
Decay 40K = **5.530 ± 0.048 E-10 1/a**
Decay 39Ar = **2.940 ± 0.016 E-07 1/h**
Decay 37Ar = **8.230 ± 0.012 E-04 1/h**
Decay 36Cl = **2.257 ± 0.015 E-06 1/a**
Decay 40K(EC,β^+) = **0.580 ± 0.009 E-10 1/a**
Decay 40K(β^-) = **4.950 ± 0.043 E-10 1/a**
Atmospheric 40/36(a) = **295.50**
Atmospheric 38/36(a) = **0.1869**
Production 39/37(ca) = **0.0006756 ± 0.0000089**
Production 38/37(ca) = **0.0000718 ± 0.0000092**
Production 36/37(ca) = **0.0002663 ± 0.0000004**
Production 40/39(k) = **0.003823 ± 0.000102**
Production 38/39(k) = **0.012031 ± 0.000019**
Production 36/38(cl) = **262.80 ± 1.71**
Scaling Ratio K/Ca = **0.430**
Abundance Ratio 40K/K = **1.1700 ± 0.0100 E-04**
Atomic Weight K = **39.0983 ± 0.0001 g**

Low T steps a little odd, not great but acceptable. Weak excess argon signature.

Results	40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD	39Ar(k) (%,n)	K/Ca ± 2σ
Age Plateau		8.46367 ± 0.00623	**25.05 ± 0.06**	1.57	63.86	0.379 ± 0.056
		± 0.07%	**± 0.25%**	18%	5	
		Full External Error ± 0.57		2.41	2σ Confidence Limit	
		Analytical Error ± 0.02		1.2527	Error Magnification	
Total Fusion Age		8.46210 ± 0.00368	**25.04 ± 0.06**		20	0.360 ± 0.001
		± 0.04%	**± 0.24%**			
		Full External Error ± 0.57				
		Analytical Error ± 0.01				
Normal Isochron	**336.80 ± 119.00**	8.45925 ± 0.01035	**25.03 ± 0.07**	2.14	63.86	
	± 35.33%	± 0.12%	**± 0.27%**	9%	5	
		Full External Error ± 0.57		2.63	2σ Confidence Limit	
		Analytical Error ± 0.03		1.4645	Error Magnification	
Inverse Isochron	**311.16 ± 110.25**	8.46275 ± 0.00989	**25.04 ± 0.07**	2.04	63.86	
Clustered Points	**± 35.43%**	± 0.12%	**± 0.27%**	11%	5	
		Full External Error ± 0.57		2.63	2σ Confidence Limit	
		Analytical Error ± 0.03		1.4291	Error Magnification	
				1%	Spreading Factor	





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

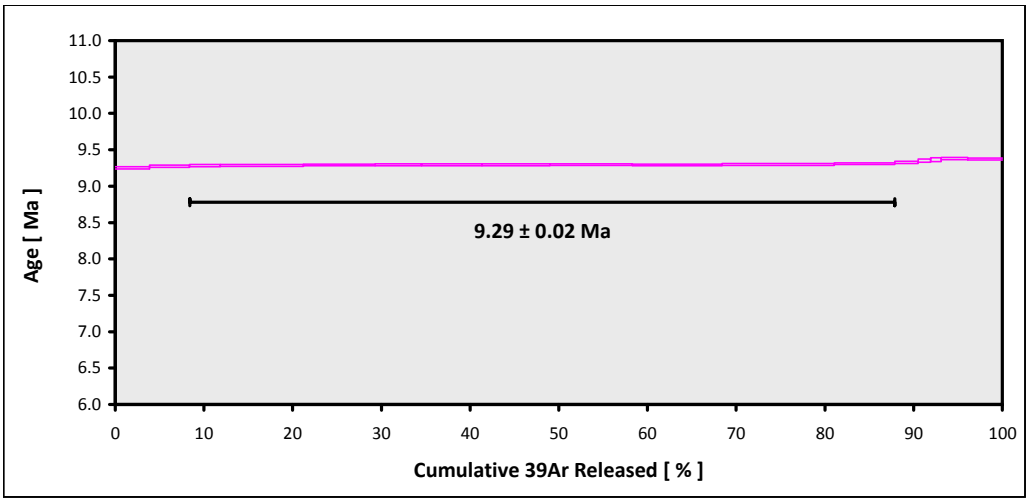
EXP#13D04248 > MV1203-D42-17 > K Feldspar > MV1203 (13-INT-04)
WALVIS RIDGE > ESK GUYOT
13-OSU-05 > Incremental Heating > Susan Schnur

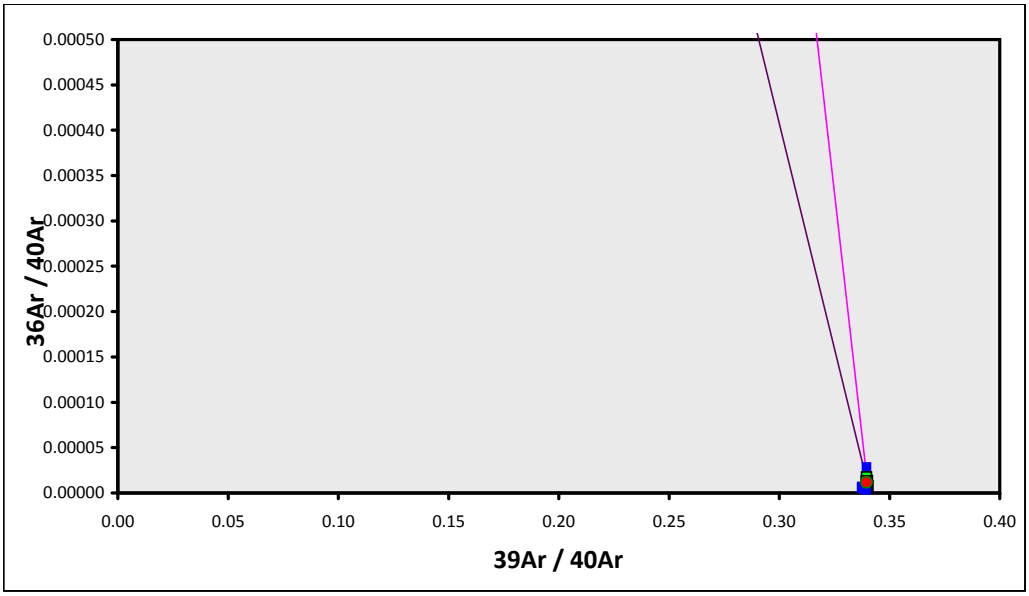
Information on Analysis and Constants Used in Calculations

Project = **MV1203 (13-INT-04)**
Sample = **MV1203-D42-17**
Material = **K Feldspar**
Location = **Esk Guyot**
Region = **Walvis Ridge**
Analyst = **Susan Schnur**
Irradiation = **13-OSU-05**
Position = **X: | Y: | Z/H: 17.16 mm**
FCT-NM Age = **28.201 ± 0.023 Ma**
FCT-NM Reference = **Kuiper et al (2008)**
FCT-NM 40Ar/39Ar Ratio = **8.94456 ± 0.01154**
FCT-NM J-value = **0.00175720 ± 0.00000227**
Air Shot 40Ar/36Ar = **302.7560 ± 0.2846**
Air Shot MDF = **0.99400063 ± 0.00062293 (LIN)**
Experiment Type = **Incremental Heating**
Extraction Method = **Bulk Laser Heating**
Heating = **60 sec**
Isolation = **5.52 min**
Instrument = **ARGUS-VI-D**
Preferred Age = **Plateau Age**
Age Classification = **Eruption Age**
IGSN = **IESRS0012**
Rock Class = **Igneous>Volcanic>Mafic**
Lithology = **Trachyte**
Lat-Lon = **38°41.2'S - 11°48.1'W**
Age Equations = **Min et al. (2000)**
Negative Intensities = **Allowed**
Collector Calibrations = **40Ar 36Ar**
Decay 40K = **5.530 ± 0.048 E-10 1/a**
Decay 39Ar = **2.940 ± 0.016 E-07 1/h**
Decay 37Ar = **8.230 ± 0.012 E-04 1/h**
Decay 36Cl = **2.257 ± 0.015 E-06 1/a**
Decay 40K(EC,β^+) = **0.580 ± 0.009 E-10 1/a**
Decay 40K(β^-) = **4.950 ± 0.043 E-10 1/a**
Atmospheric 40/36(a) = **295.50**
Atmospheric 38/36(a) = **0.1869**
Production 39/37(ca) = **0.0006756 ± 0.0000089**
Production 38/37(ca) = **0.0000718 ± 0.0000092**
Production 36/37(ca) = **0.0002663 ± 0.0000004**
Production 40/39(k) = **0.003823 ± 0.000102**
Production 38/39(k) = **0.012031 ± 0.000019**
Production 36/38(cl) = **262.80 ± 1.71**
Scaling Ratio K/Ca = **0.430**
Abundance Ratio 40K/K = **1.1700 ± 0.0100 E-04**
Atomic Weight K = **39.0983 ± 0.0001 g**

Good plateau, weak excess argon signature at high T.

Results	40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD	39Ar(k) (%,n)	K/Ca ± 2σ
Age Plateau		2.93232 ± 0.00141	**9.29 ± 0.02**	1.22	79.49	3.32 ± 0.24
		± 0.05%	**± 0.26%**	27%	10	
		Full External Error ± 0.21		1.94	2σ Confidence Limit	
		Analytical Error ± 0.00		1.1067	Error Magnification	
Total Fusion Age		2.93417 ± 0.00111	**9.30 ± 0.02**		17	3.30 ± 0.03
		± 0.04%	**± 0.26%**			
		Full External Error ± 0.21				
		Analytical Error ± 0.00				
Normal Isochron	**99.31 ± 129.91**	2.93885 ± 0.00448	**9.31 ± 0.03**	0.77	79.49	
	**######## **	± 0.15%	**± 0.30%**	63%	10	
		Full External Error ± 0.21		2.00	2σ Confidence Limit	
		Analytical Error ± 0.01		1.0000	Error Magnification	
Inverse Isochron	**137.19 ± 86.88**	2.93753 ± 0.00449	**9.31 ± 0.03**	0.73	79.49	
Clustered Points	**± 63.33%**	± 0.15%	**± 0.30%**	67%	10	
		Full External Error ± 0.21		2.00	2σ Confidence Limit	
		Analytical Error ± 0.01		1.0000	Error Magnification	
				0%	Spreading Factor	





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

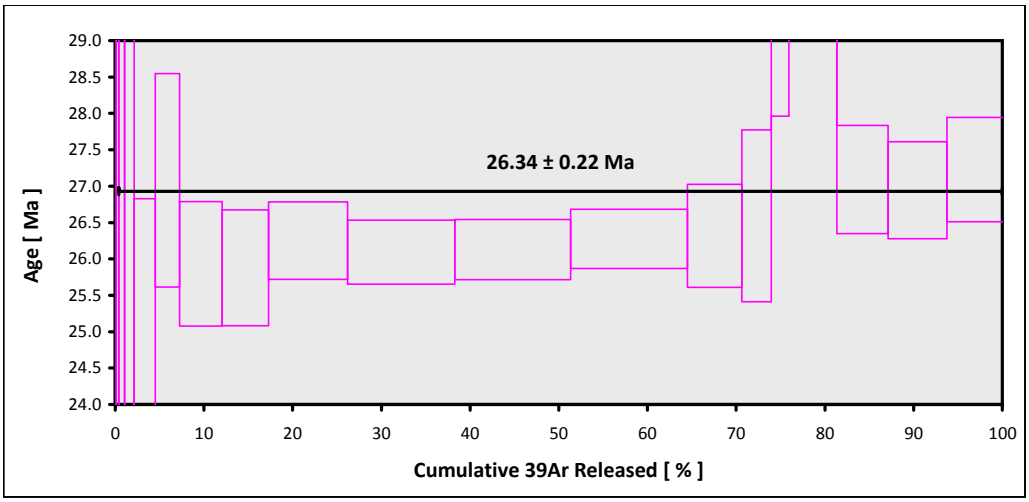
EXP#13D04282 > MV1203-D38-02B > Plagioclase > MV1203 (13-INT-04)
WALVIS RIDGE > HECTOR GUYOT
13-OSU-05 > Incremental Heating > Susan Schnur

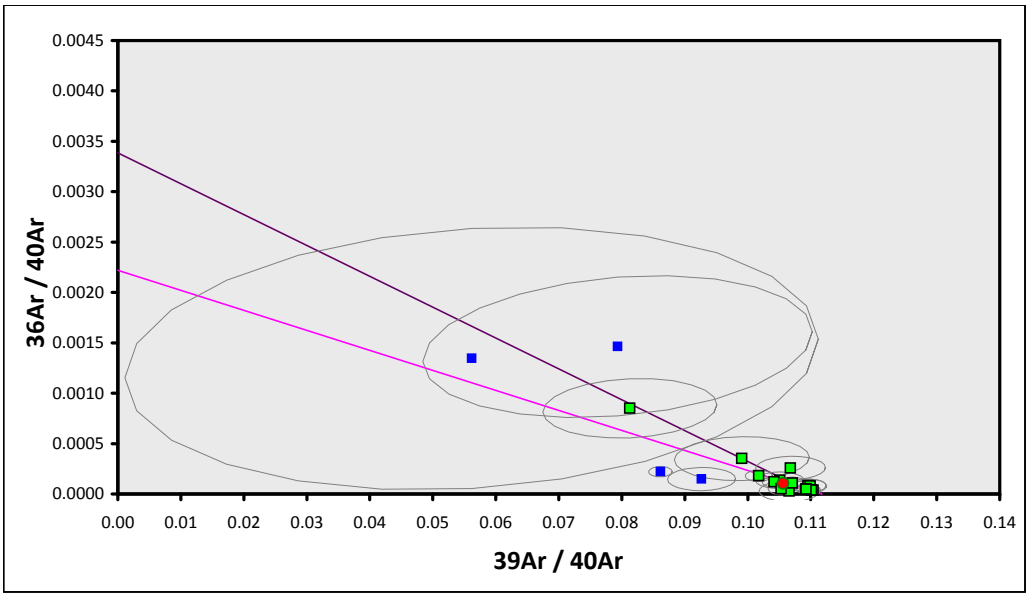
Information on Analysis and Constants Used in Calculations

Project = **MV1203 (13-INT-04)**
Sample = **MV1203-D38-02B**
Material = **Plagioclase**
Location = **Hector Guyot**
Region = **Walvis Ridge**
Analyst = **Susan Schnur**
Irradiation = **13-OSU-05**
Position = **X: 0 | Y: 0 | Z/H: 49.1 mm**
FCT-NM Age = **28.020 ± 0.040 Ma**
FCT-NM Reference = **Kuiper et al (2008)**
FCT-NM 40Ar/39Ar Ratio = **9.62770 ± 0.01155**
FCT-NM J-value = **0.00162196 ± 0.00000195**
Air Shot 40Ar/36Ar = **302.7590 ± 0.2846**
Air Shot MDF = **0.99399821 ± 0.00062292 (LIN)**
Experiment Type = **Incremental Heating**
Extraction Method = **Bulk Laser Heating**
Heating = **77 sec**
Isolation = **6.00 min**
Instrument = **ARGUS-VI-D**
Preferred Age = **Plateau Age**
Age Classification = **Eruption Age**
IGSN = **IESRS0013**
Rock Class = **Igneous>Volcanic>Mafic**
Lithology = **Basalt**
Lat-Lon = **37°47.2'S - 8°52.3'W**
Age Equations = **Min et al. (2000)**
Negative Intensities = **Allowed**
Collector Calibrations = **40Ar 36Ar**
Decay 40K = **5.530 ± 0.048 E-10 1/a**
Decay 39Ar = **2.940 ± 0.016 E-07 1/h**
Decay 37Ar = **8.230 ± 0.012 E-04 1/h**
Decay 36Cl = **2.257 ± 0.015 E-06 1/a**
Decay 40K(EC,β^+) = **0.580 ± 0.009 E-10 1/a**
Decay 40K(β^-) = **4.950 ± 0.043 E-10 1/a**
Atmospheric 40/36(a) = **295.50**
Atmospheric 38/36(a) = **0.1869**
Production 39/37(ca) = **0.0006756 ± 0.0000089**
Production 38/37(ca) = **0.0000718 ± 0.0000092**
Production 36/37(ca) = **0.0002663 ± 0.0000004**
Production 40/39(k) = **0.003823 ± 0.000102**
Production 38/39(k) = **0.012031 ± 0.000019**
Production 36/38(cl) = **262.80 ± 1.71**
Scaling Ratio K/Ca = **0.430**
Abundance Ratio 40K/K = **1.1700 ± 0.0100 E-04**
Atomic Weight K = **39.0983 ± 0.0001 g**

Strange high-age blip towards end but Plateau is otherwise fine. Could be melt inclusion.

Results	40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD	39Ar(k) (%,n)	K/Ca ± 2σ
Age Plateau		9.04637 ± 0.07444	**26.34 ± 0.22**	1.53	92.24	0.0046 ± 0.0000
		± 0.82%	**± 0.85%**	9%	15	
		Full External Error ± 0.64		1.76	2σ Confidence Limit	
		Analytical Error ± 0.22		1.2387	Error Magnification	
Total Fusion Age		9.17383 ± 0.06558	**26.71 ± 0.20**		19	0.0046 ± 0.0000
		± 0.71%	**± 0.75%**			
		Full External Error ± 0.64				
		Analytical Error ± 0.19				
Normal Isochron	**176.67 ± 169.75**	9.14168 ± 0.12338	**26.62 ± 0.36**	2.44	92.24	
Error Chron	**± 96.08%**	± 1.35%	**± 1.36%**	0%	15	
		Full External Error ± 0.70		1.78	2σ Confidence Limit	
		Analytical Error ± 0.36		1.5614	Error Magnification	
Inverse Isochron	**450.44 ± 148.16**	8.94829 ± 0.12681	**26.06 ± 0.37**	1.12	92.24	
	± 32.89%	± 1.42%	**± 1.43%**	34%	15	
		Full External Error ± 0.70		1.78	2σ Confidence Limit	
		Analytical Error ± 0.37		1.0562	Error Magnification	
				26%	Spreading Factor	





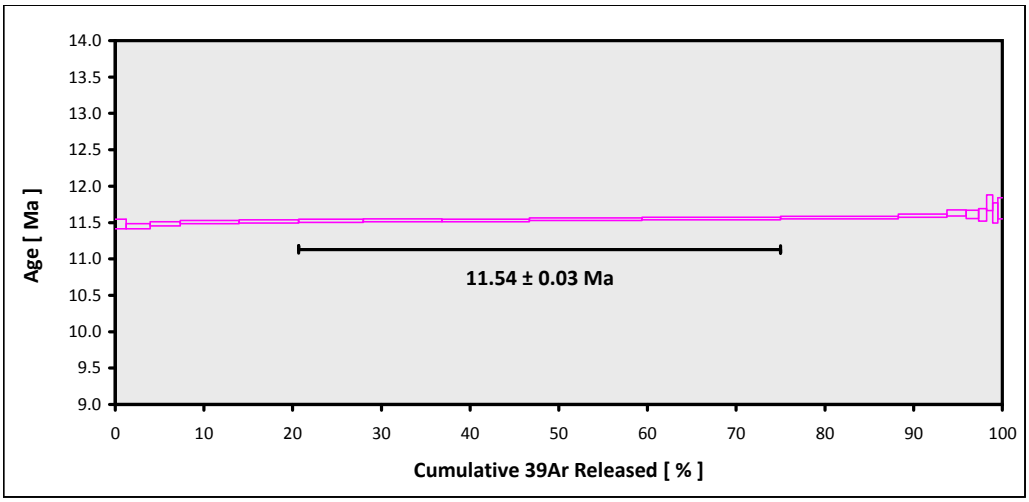
EXP#13D04309 > MV1203-D43B-07 > Feldspar > MV1203 (13-INT-04)
WALVIS RIDGE > CRAWFORD GUYOT
13-OSU-05 > Incremental Heating > Susan Schnur

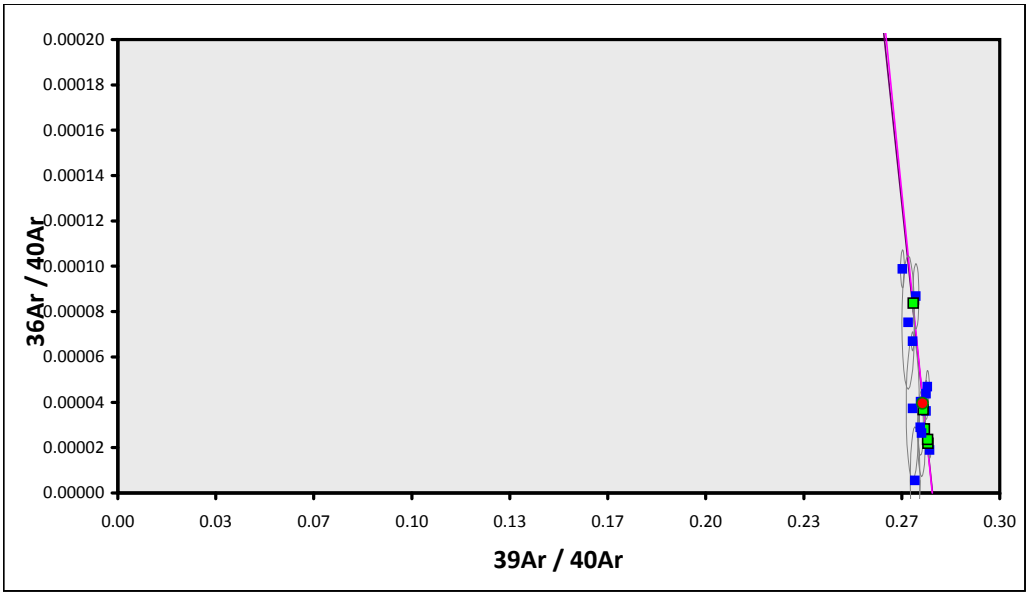
Information on Analysis and Constants Used in Calculations

Project = **MV1203 (13-INT-04)**
Sample = **MV1203-D43B-07**
Material = **Feldspar**
Location = **Crawford Guyot**
Region = **Walvis Ridge**
Analyst = **Susan Schnur**
Irradiation = **13-OSU-05**
Position = **X: | Y: | Z/H: 9.86 mm**
FCT-NM Age = **28.201 ± 0.023 Ma**
FCT-NM Reference = **Kuiper et al (2008)**
FCT-NM 40Ar/39Ar Ratio = **8.85866 ± 0.01152**
FCT-NM J-value = **0.00177424 ± 0.00000231**
Air Shot 40Ar/36Ar = **302.7600 ± 0.2846**
Air Shot MDF = **0.99399740 ± 0.00062292 (LIN)**
Experiment Type = **Incremental Heating**
Extraction Method = **Bulk Laser Heating**
Heating = **60 sec**
Isolation = **5.52 min**
Instrument = **ARGUS-VI-D**
Preferred Age = **Plateau Age**
Age Classification = **Eruption Age**
IGSN = **IESRS0014**
Rock Class = **Igneous>Volcanic>Mafic**
Lithology = **Trachyte**
Lat-Lon = **38°46.5'S - 10°41.3'W**
Age Equations = **Min et al. (2000)**
Negative Intensities = **Allowed**
Collector Calibrations = **40Ar 36Ar**
Decay 40K = **5.530 ± 0.048 E-10 1/a**
Decay 39Ar = **2.940 ± 0.016 E-07 1/h**
Decay 37Ar = **8.230 ± 0.012 E-04 1/h**
Decay 36Cl = **2.257 ± 0.015 E-06 1/a**
Decay 40K(EC,β^+) = **0.580 ± 0.009 E-10 1/a**
Decay 40K(β^-) = **4.950 ± 0.043 E-10 1/a**
Atmospheric 40/36(a) = **295.50**
Atmospheric 38/36(a) = **0.1869**
Production 39/37(ca) = **0.0006756 ± 0.0000089**
Production 38/37(ca) = **0.0000718 ± 0.0000092**
Production 36/37(ca) = **0.0002663 ± 0.0000004**
Production 40/39(k) = **0.003823 ± 0.000102**
Production 38/39(k) = **0.012031 ± 0.000019**
Production 36/38(cl) = **262.80 ± 1.71**
Scaling Ratio K/Ca = **0.430**
Abundance Ratio 40K/K = **1.1700 ± 0.0100 E-04**
Atomic Weight K = **39.0983 ± 0.0001 g**

Slanting slightly upwards but plateau is fine. Excess argon signature.

Results	40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD	39Ar(k) (%,n)	K/Ca ± 2σ
Age Plateau		3.60783 ± 0.00365	**11.54 ± 0.03**	2.00	54.33	0.364 ± 0.006
		± 0.10%	**± 0.28%**	9%	5	
		Full External Error ± 0.26		2.41	2σ Confidence Limit	
		Analytical Error ± 0.01		1.4127	Error Magnification	
Total Fusion Age		3.60968 ± 0.00192	**11.54 ± 0.03**		18	0.363 ± 0.001
		± 0.05%	**± 0.26%**			
		Full External Error ± 0.26				
		Analytical Error ± 0.01				
Normal Isochron	**303.72 ± 59.82**	3.60555 ± 0.00914	**11.53 ± 0.04**	3.10	54.33	
Error Chron	**± 19.69%**	± 0.25%	**± 0.36%**	3%	5	
		Full External Error ± 0.26		2.63	2σ Confidence Limit	
		Analytical Error ± 0.03		1.7613	Error Magnification	
Inverse Isochron	**281.80 ± 52.23**	3.60962 ± 0.00799	**11.54 ± 0.04**	2.45	54.33	
Clustered Points	**± 18.53%**	± 0.22%	**± 0.34%**	6%	5	
		Full External Error ± 0.26		2.63	2σ Confidence Limit	
		Analytical Error ± 0.03		1.5661	Error Magnification	
				2%	Spreading Factor	





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

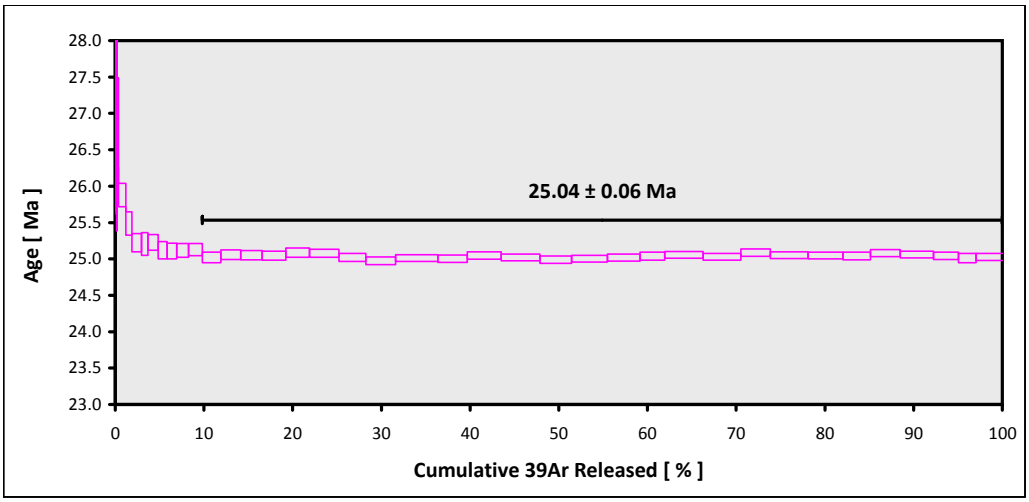
EXP#13D04334 > MV1203-D40-25 > Biotite > MV1203 (13-INT-04)
WALVIS RIDGE > DUSKY GUYOT
13-OSU-05 > Incremental Heating > Susan Schnur

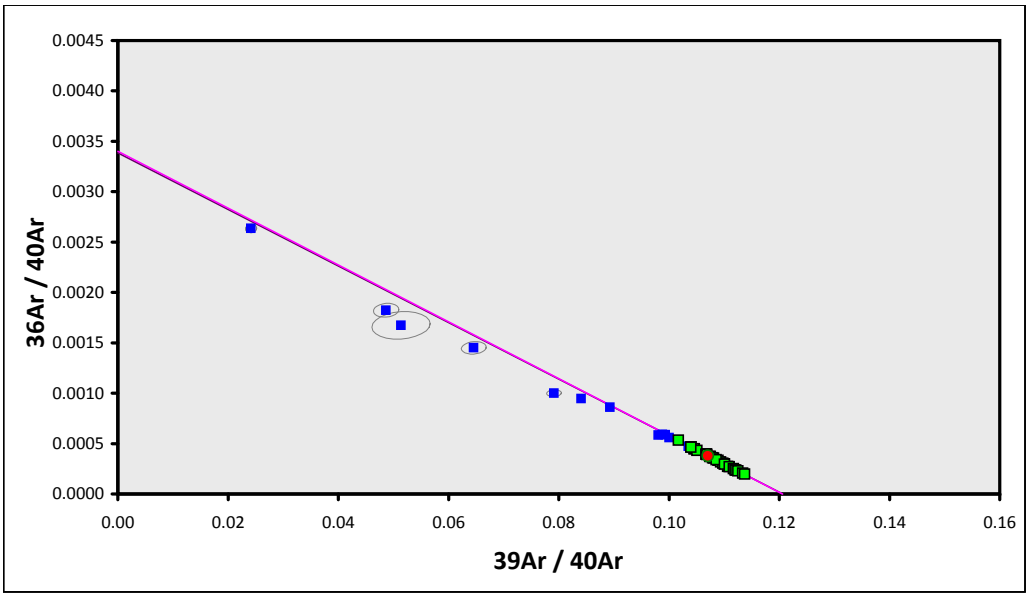
Information on Analysis and Constants Used in Calculations

Project = **MV1203 (13-INT-04)**
Sample = **MV1203-D40-25**
Material = **Biotite**
Location = **Dusky Guyot**
Region = **Walvis Ridge**
Analyst = **Susan Schnur**
Irradiation = **13-OSU-05**
Position = **X: | Y: | Z/H: 38.42 mm**
FCT-NM Age = **28.201 ± 0.023 Ma**
FCT-NM Reference = **Kuiper et al (2008)**
FCT-NM 40Ar/39Ar Ratio = **9.34360 ± 0.01159**
FCT-NM J-value = **0.00168216 ± 0.00000209**
Air Shot 40Ar/36Ar = **302.7630 ± 0.2846**
Air Shot MDF = **0.99399498 ± 0.00062292 (LIN)**
Experiment Type = **Incremental Heating**
Extraction Method = **Bulk Laser Heating**
Heating = **60 sec**
Isolation = **5.52 min**
Instrument = **ARGUS-VI-D**
Preferred Age = **Plateau Age**
Age Classification = **Eruption Age**
IGSN = **IESRS0015**
Rock Class = **Igneous>Volcanic>Mafic**
Lithology = **Trachyte**
Lat-Lon = **37°55.1'S - 6°53.2'W**
Age Equations = **Min et al. (2000)**
Negative Intensities = **Allowed**
Collector Calibrations = **40Ar 36Ar**
Decay 40K = **5.530 ± 0.048 E-10 1/a**
Decay 39Ar = **2.940 ± 0.016 E-07 1/h**
Decay 37Ar = **8.230 ± 0.012 E-04 1/h**
Decay 36Cl = **2.257 ± 0.015 E-06 1/a**
Decay 40K(EC,β^+) = **0.580 ± 0.009 E-10 1/a**
Decay 40K(β^-) = **4.950 ± 0.043 E-10 1/a**
Atmospheric 40/36(a) = **295.50**
Atmospheric 38/36(a) = **0.1869**
Production 39/37(ca) = **0.0006756 ± 0.0000089**
Production 38/37(ca) = **0.0000718 ± 0.0000092**
Production 36/37(ca) = **0.0002663 ± 0.0000004**
Production 40/39(k) = **0.003823 ± 0.000102**
Production 38/39(k) = **0.012031 ± 0.000019**
Production 36/38(cl) = **262.80 ± 1.71**
Scaling Ratio K/Ca = **0.430**
Abundance Ratio 40K/K = **1.1700 ± 0.0100 E-04**
Atomic Weight K = **39.0983 ± 0.0001 g**

Low T steps are variable, but high T gives a Good plateau plateau.

Results	40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD	39Ar(k) (%,n)	K/Ca ± 2σ
Age Plateau		8.28793 ± 0.00363 (± 0.04%)	**25.04 ± 0.06 (± 0.25%)**	1.21	90.18	4.3 ± 0.5
			Full External Error ± 0.57	21%	27	
			Analytical Error ± 0.01	1.55	2σ Confidence Limit	
				1.1008	Error Magnification	
Total Fusion Age		8.29728 ± 0.00332 (± 0.04%)	**25.06 ± 0.06 (± 0.25%)**		41	6.9 ± 0.3
			Full External Error ± 0.57			
			Analytical Error ± 0.01			
Normal Isochron	**294.50 ± 4.50 (± 1.53%)**	8.29084 ± 0.01422 (± 0.17%)	**25.05 ± 0.07 (± 0.30%)**	1.24	90.18	
			Full External Error ± 0.57	19%	27	
			Analytical Error ± 0.04	1.57	2σ Confidence Limit	
				1.1148	Error Magnification	
Inverse Isochron	**294.13 ± 4.49 (± 1.53%)**	8.29214 ± 0.01419 (± 0.17%)	**25.05 ± 0.07 (± 0.30%)**	1.24	90.18	
			Full External Error ± 0.57	19%	27	
			Analytical Error ± 0.04	1.57	2σ Confidence Limit	
				1.1142	Error Magnification	
				10%	Spreading Factor	





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

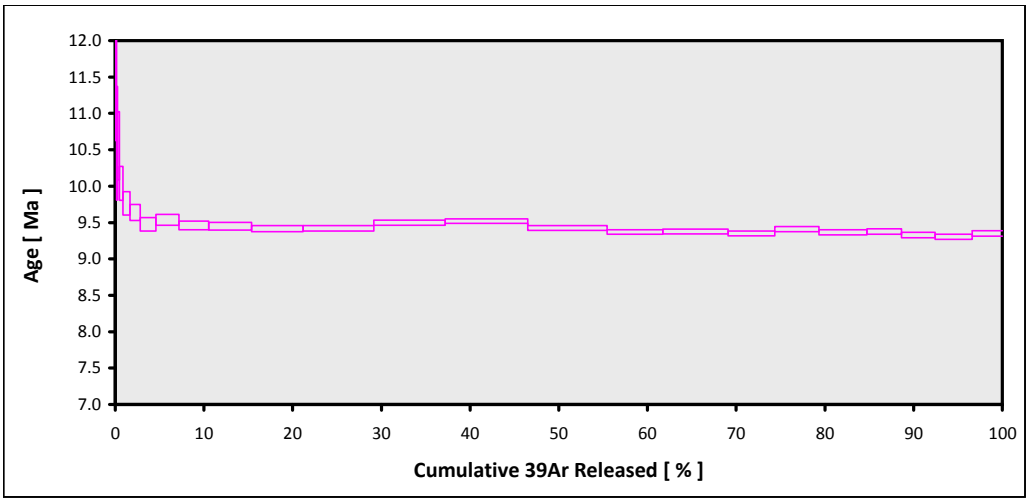
EXP#13D04400 > MV1203-D42-08 > Biotite > MV1203 (13-INT-04)
WALVIS RIDGE > ESK GUYOT
13-OSU-05 > Incremental Heating > Susan Schnur

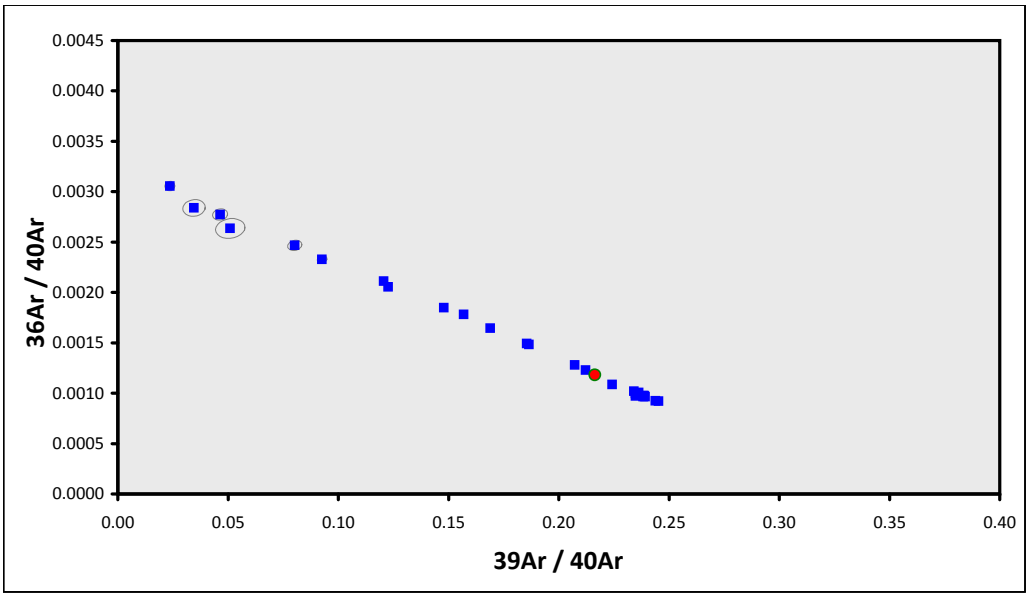
Information on Analysis and Constants Used in Calculations

Project = **MV1203 (13-INT-04)**
Sample = **MV1203-D42-08**
Material = **Biotite**
Location = **Esk Guyot**
Region = **Walvis Ridge**
Analyst = **Susan Schnur**
Irradiation = **13-OSU-05**
Position = **X: | Y: | Z/H: 23.2 mm**
FCT-NM Age = **28.201 ± 0.023 Ma**
FCT-NM Reference = **Kuiper et al (2008)**
FCT-NM 40Ar/39Ar Ratio = **9.03539 ± 0.01157**
FCT-NM J-value = **0.00173954 ± 0.00000223**
Air Shot 40Ar/36Ar = **302.7630 ± 0.2846**
Air Shot MDF = **0.99399498 ± 0.00062292 (LIN)**
Experiment Type = **Incremental Heating**
Extraction Method = **Bulk Laser Heating**
Heating = **60 sec**
Isolation = **5.52 min**
Instrument = **ARGUS-VI-D**
Preferred Age = Undefined
Age Classification = Undefined
IGSN = **IESRS0016**
Rock Class = **Igneous>Volcanic>Mafic**
Lithology = **Trachyte**
Lat-Lon = **38°41.2'S - 11°48.1'W**
Age Equations = **Min et al. (2000)**
Negative Intensities = **Allowed**
Collector Calibrations = **40Ar 36Ar**
Decay 40K = **5.530 ± 0.048 E-10 1/a**
Decay 39Ar = **2.940 ± 0.016 E-07 1/h**
Decay 37Ar = **8.230 ± 0.012 E-04 1/h**
Decay 36Cl = **2.257 ± 0.015 E-06 1/a**
Decay 40K(EC,β^+) = **0.580 ± 0.009 E-10 1/a**
Decay 40K(β^-) = **4.950 ± 0.043 E-10 1/a**
Atmospheric 40/36(a) = **295.50**
Atmospheric 38/36(a) = **0.1869**
Production 39/37(ca) = **0.0006756 ± 0.0000089**
Production 38/37(ca) = **0.0000718 ± 0.0000092**
Production 36/37(ca) = **0.0002663 ± 0.0000004**
Production 40/39(k) = **0.003823 ± 0.000102**
Production 38/39(k) = **0.012031 ± 0.000019**
Production 36/38(cl) = **262.80 ± 1.71**
Scaling Ratio K/Ca = **0.430**
Abundance Ratio 40K/K = **1.1700 ± 0.0100 E-04**
Atomic Weight K = **39.0983 ± 0.0001 g**

Slanting downwards, bumpy, excess argon.

Results	40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD	39Ar(k) (%,n)	K/Ca ± 2σ
Age Plateau						
Cannot Calculate						
Total Fusion Age		3.00686 ± 0.00306 ± 0.10%	**9.43 ± 0.03 ± 0.27%**		27	76 ± 22
			Full External Error ± 0.21			
			Analytical Error ± 0.01			
Normal Isochron						
Cannot Calculate						
Inverse Isochron						
Cannot Calculate						





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

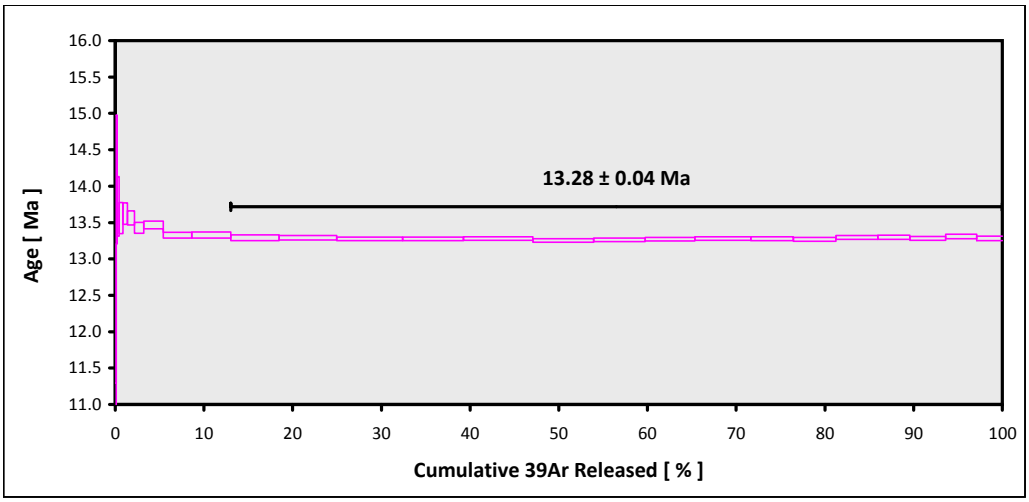
EXP#13D04437 > MV1203-D43A-01 > Biotite > MV1203 (13-INT-04)
WALVIS RIDGE > CRAWFORD GUYOT
13-OSU-05 > Incremental Heating > Susan Schnur

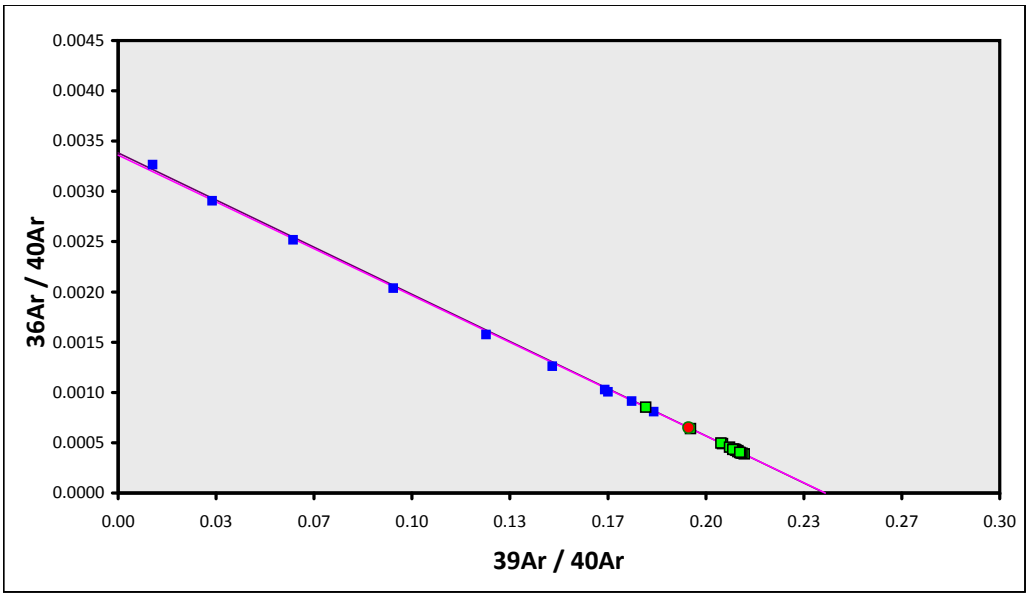
Information on Analysis and Constants Used in Calculations

Project = **MV1203 (13-INT-04)**
Sample = **MV1203-D43A-01**
Material = **Biotite**
Location = **Crawford Guyot**
Region = **Walvis Ridge**
Analyst = **Susan Schnur**
Irradiation = **13-OSU-05**
Position = **X: | Y: | Z/H: 11.07 mm**
FCT-NM Age = **28.201 ± 0.023 Ma**
FCT-NM Reference = **Kuiper et al (2008)**
FCT-NM 40Ar/39Ar Ratio = **8.87110 ± 0.01153**
FCT-NM J-value = **0.00177175 ± 0.00000230**
Air Shot 40Ar/36Ar = **302.7830 ± 0.2846**
Air Shot MDF = **0.99397885 ± 0.00062287 (LIN)**
Experiment Type = **Incremental Heating**
Extraction Method = **Bulk Laser Heating**
Heating = **60 sec**
Isolation = **5.52 min**
Instrument = **ARGUS-VI-D**
Preferred Age = **Plateau Age**
Age Classification = **Eruption Age**
IGSN = **IESRS0017**
Rock Class = **Igneous>Volcanic>Mafic**
Lithology = **Trachyte**
Lat-Lon = **38°46.3'S - 10°41.4'W**
Age Equations = **Min et al. (2000)**
Negative Intensities = **Allowed**
Collector Calibrations = **40Ar 36Ar**
Decay 40K = **5.530 ± 0.048 E-10 1/a**
Decay 39Ar = **2.940 ± 0.016 E-07 1/h**
Decay 37Ar = **8.230 ± 0.012 E-04 1/h**
Decay 36Cl = **2.257 ± 0.015 E-06 1/a**
Decay 40K(EC,β^+) = **0.580 ± 0.009 E-10 1/a**
Decay 40K(β^-) = **4.950 ± 0.043 E-10 1/a**
Atmospheric 40/36(a) = **295.50**
Atmospheric 38/36(a) = **0.1869**
Production 39/37(ca) = **0.0006756 ± 0.0000089**
Production 38/37(ca) = **0.0000718 ± 0.0000092**
Production 36/37(ca) = **0.0002663 ± 0.0000004**
Production 40/39(k) = **0.003823 ± 0.000102**
Production 38/39(k) = **0.012031 ± 0.000019**
Production 36/38(cl) = **262.80 ± 1.71**
Scaling Ratio K/Ca = **0.430**
Abundance Ratio 40K/K = **1.1700 ± 0.0100 E-04**
Atomic Weight K = **39.0983 ± 0.0001 g**

Good plateau

Results	40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD	39Ar(k) (%,n)	K/Ca ± 2σ
Age Plateau		4.15992 ± 0.00217	**13.28 ± 0.04**	1.09	86.98	69 ± 21
		± 0.05%	**± 0.26%**	36%	16	
		Full External Error ± 0.30		1.73	2σ Confidence Limit	
		Analytical Error ± 0.01		1.0446	Error Magnification	
Total Fusion Age		4.16362 ± 0.00225	**13.29 ± 0.04**		26	101 ± 38
		± 0.05%	**± 0.26%**			
		Full External Error ± 0.30				
		Analytical Error ± 0.01				
Normal Isochron	**297.17 ± 3.92**	4.15622 ± 0.00887	**13.27 ± 0.04**	1.09	86.98	
	± 1.32%	± 0.21%	**± 0.34%**	36%	16	
		Full External Error ± 0.30		1.76	2σ Confidence Limit	
		Analytical Error ± 0.03		1.0441	Error Magnification	
Inverse Isochron	**297.44 ± 3.93**	4.15567 ± 0.00888	**13.27 ± 0.04**	1.09	86.98	
	± 1.32%	± 0.21%	**± 0.34%**	36%	16	
		Full External Error ± 0.30		1.76	2σ Confidence Limit	
		Analytical Error ± 0.03		1.0451	Error Magnification	
				14%	Spreading Factor	





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

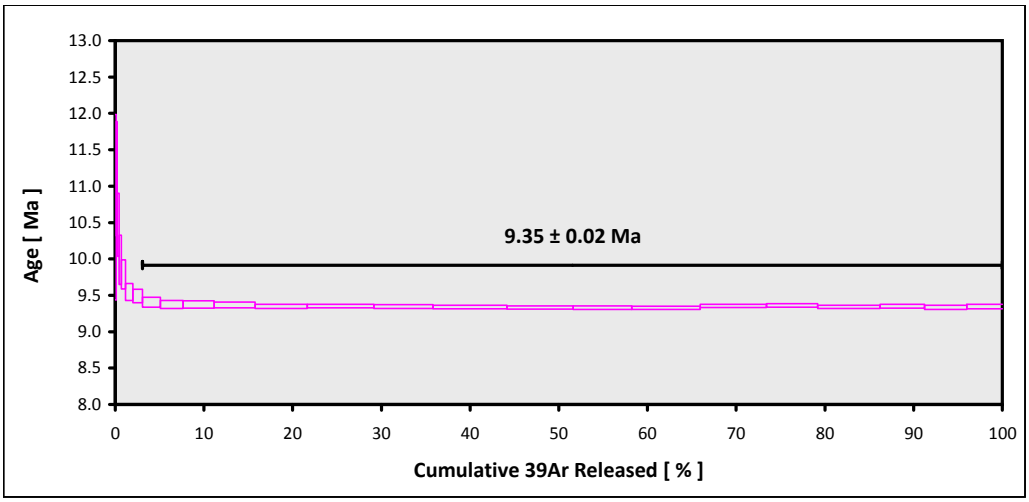
EXP#13D04484 > MV1203-D42-17 > Biotite > MV1203 (13-INT-04)
WALVIS RIDGE > ESK GUYOT
13-OSU-05 > Incremental Heating > Susan Schnur

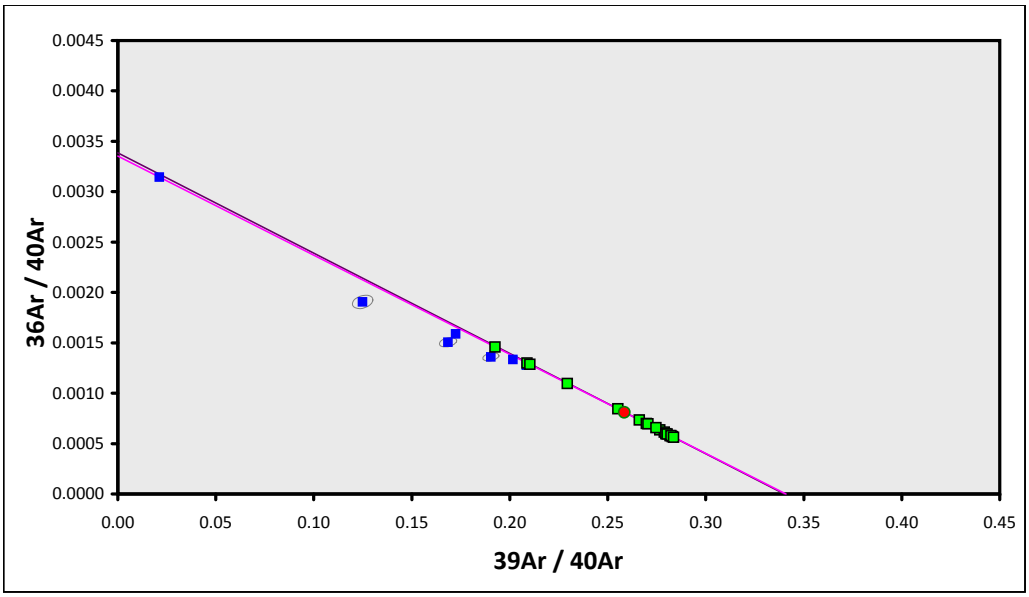
Information on Analysis and Constants Used in Calculations

Project = **MV1203 (13-INT-04)**
Sample = **MV1203-D42-17**
Material = **Biotite**
Location = **Esk Guyot**
Region = **Walvis Ridge**
Analyst = **Susan Schnur**
Irradiation = **13-OSU-05**
Position = **X: | Y: | Z/H: 15.21 mm**
FCT-NM Age = **28.201 ± 0.023 Ma**
FCT-NM Reference = **Kuiper et al (2008)**
FCT-NM 40Ar/39Ar Ratio = **8.91906 ± 0.01151**
FCT-NM J-value = **0.00176223 ± 0.00000227**
Air Shot 40Ar/36Ar = **302.7780 ± 0.2816**
Air Shot MDF = **0.99398288 ± 0.00062199 (LIN)**
Experiment Type = **Incremental Heating**
Extraction Method = **Bulk Laser Heating**
Heating = **60 sec**
Isolation = **5.52 min**
Instrument = **ARGUS-VI-D**
Preferred Age = **Plateau Age**
Age Classification = **Eruption Age**
IGSN = **IESRS0018**
Rock Class = **Igneous>Volcanic>Mafic**
Lithology = **Trachyte**
Lat-Lon = **38°41.2'S - 11°48.1'W**
Age Equations = **Min et al. (2000)**
Negative Intensities = **Allowed**
Collector Calibrations = **40Ar 36Ar**
Decay 40K = **5.530 ± 0.048 E-10 1/a**
Decay 39Ar = **2.940 ± 0.016 E-07 1/h**
Decay 37Ar = **8.230 ± 0.012 E-04 1/h**
Decay 36Cl = **2.257 ± 0.015 E-06 1/a**
Decay 40K(EC,β^+) = **0.580 ± 0.009 E-10 1/a**
Decay 40K(β^-) = **4.950 ± 0.043 E-10 1/a**
Atmospheric 40/36(a) = **295.50**
Atmospheric 38/36(a) = **0.1869**
Production 39/37(ca) = **0.0006756 ± 0.0000089**
Production 38/37(ca) = **0.0000718 ± 0.0000092**
Production 36/37(ca) = **0.0002663 ± 0.0000004**
Production 40/39(k) = **0.003823 ± 0.000102**
Production 38/39(k) = **0.012031 ± 0.000019**
Production 36/38(cl) = **262.80 ± 1.71**
Scaling Ratio K/Ca = **0.430**
Abundance Ratio 40K/K = **1.1700 ± 0.0100 E-04**
Atomic Weight K = **39.0983 ± 0.0001 g**

Good plateau

Results	40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD	39Ar(k) (%,n)	K/Ca ± 2σ
Age Plateau		2.94023 ± 0.00207 (± 0.07%)	**9.35 ± 0.02 (± 0.27%)**	0.96	96.93	46.9 ± 6.8
		Full External Error ± 0.21		50%	17	
		Analytical Error ± 0.01		1.71	2σ Confidence Limit	
				1.0000	Error Magnification	
Total Fusion Age		2.94487 ± 0.00224 (± 0.08%)	**9.36 ± 0.03 (± 0.27%)**		24	50.0 ± 7.6
		Full External Error ± 0.21				
		Analytical Error ± 0.01				
Normal Isochron	**298.07 ± 2.15 (± 0.72%)**	2.93362 ± 0.00589 (± 0.20%)	**9.32 ± 0.03 (± 0.33%)**	0.62	96.93	
		Full External Error ± 0.21		86%	17	
		Analytical Error ± 0.02		1.73	2σ Confidence Limit	
				1.0000	Error Magnification	
Inverse Isochron	**298.15 ± 2.15 (± 0.72%)**	2.93345 ± 0.00589 (± 0.20%)	**9.32 ± 0.03 (± 0.33%)**	0.62	96.93	
		Full External Error ± 0.21		86%	17	
		Analytical Error ± 0.02		1.73	2σ Confidence Limit	
				1.0000	Error Magnification	
				27%	Spreading Factor	





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

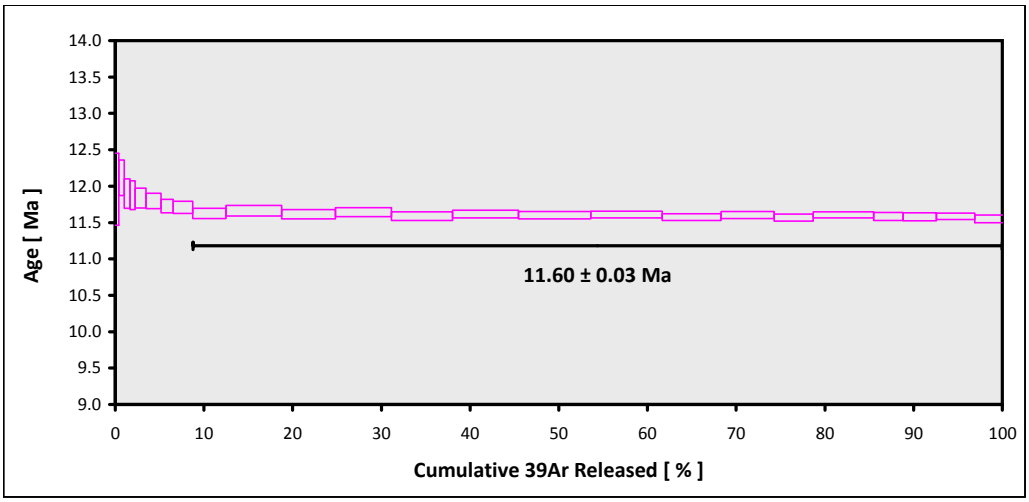
EXP#13D04517 > MV1203-D43B-07 > Biotite > MV1203 (13-INT-04)
WALVIS RIDGE > CRAWFORD GUYOT
13-OSU-05 > Incremental Heating > Susan Schnur

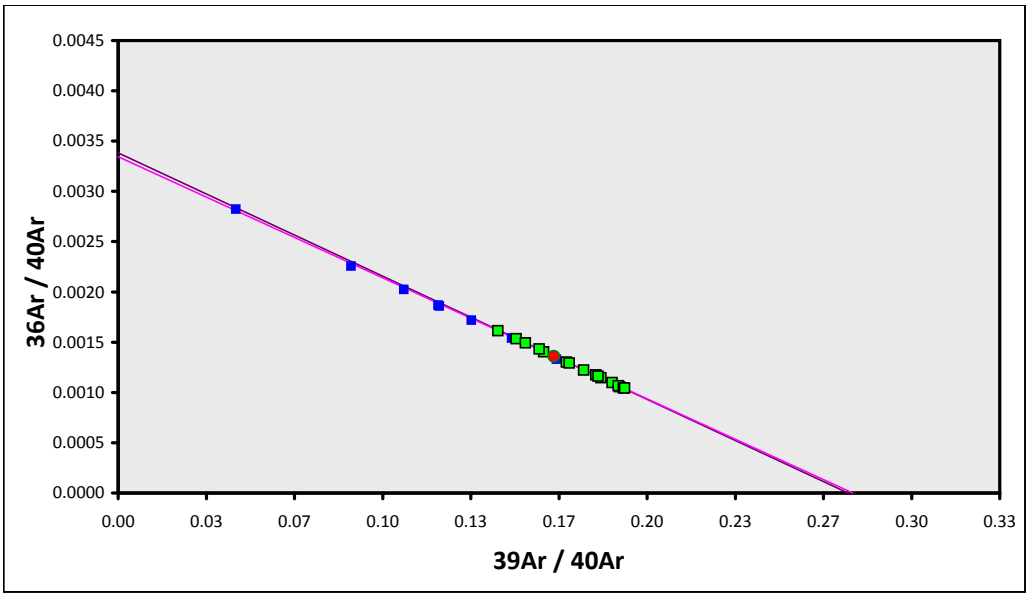
Information on Analysis and Constants Used in Calculations

Project = **MV1203 (13-INT-04)**
Sample = **MV1203-D43B-07**
Material = **Biotite**
Location = **Crawford Guyot**
Region = **Walvis Ridge**
Analyst = **Susan Schnur**
Irradiation = **13-OSU-05**
Position = **X: | Y: | Z/H: 9.31 mm**
FCT-NM Age = **28.201 ± 0.023 Ma**
FCT-NM Reference = **Kuiper et al (2008)**
FCT-NM 40Ar/39Ar Ratio = **8.85325 ± 0.01151**
FCT-NM J-value = **0.00177532 ± 0.00000231**
Air Shot 40Ar/36Ar = **302.7800 ± 0.2816**
Air Shot MDF = **0.99398127 ± 0.00062198 (LIN)**
Experiment Type = **Incremental Heating**
Extraction Method = **Bulk Laser Heating**
Heating = **60 sec**
Isolation = **5.52 min**
Instrument = **ARGUS-VI-D**
Preferred Age = **Plateau Age**
Age Classification = **Eruption Age**
IGSN = **IESRS0019**
Rock Class = **Igneous>Volcanic>Mafic**
Lithology = **Trachyte**
Lat-Lon = **38°46.5'S - 10°41.3'W**
Age Equations = **Min et al. (2000)**
Negative Intensities = **Allowed**
Collector Calibrations = **40Ar 36Ar**
Decay 40K = **5.530 ± 0.048 E-10 1/a**
Decay 39Ar = **2.940 ± 0.016 E-07 1/h**
Decay 37Ar = **8.230 ± 0.012 E-04 1/h**
Decay 36Cl = **2.257 ± 0.015 E-06 1/a**
Decay 40K(EC,β^+) = **0.580 ± 0.009 E-10 1/a**
Decay 40K(β^-) = **4.950 ± 0.043 E-10 1/a**
Atmospheric 40/36(a) = **295.50**
Atmospheric 38/36(a) = **0.1869**
Production 39/37(ca) = **0.0006756 ± 0.0000089**
Production 38/37(ca) = **0.0000718 ± 0.0000092**
Production 36/37(ca) = **0.0002663 ± 0.0000004**
Production 40/39(k) = **0.003823 ± 0.000102**
Production 38/39(k) = **0.012031 ± 0.000019**
Production 36/38(cl) = **262.80 ± 1.71**
Scaling Ratio K/Ca = **0.430**
Abundance Ratio 40K/K = **1.1700 ± 0.0100 E-04**
Atomic Weight K = **39.0983 ± 0.0001 g**

Slight downwards slant, but age seems acceptable.

Results	40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD	39Ar(k) (%,n)	K/Ca ± 2σ
Age Plateau		3.62386 ± 0.00408 (± 0.11%)	**11.60 ± 0.03 (± 0.28%)**	0.96	91.25	33.0 ± 4.3
		Full External Error ± 0.26		50%	16	
		Analytical Error ± 0.01		1.73	2σ Confidence Limit	
				1.0000	Error Magnification	
Total Fusion Age		3.63184 ± 0.00425 (± 0.12%)	**11.62 ± 0.03 (± 0.28%)**		24	36.6 ± 5.6
		Full External Error ± 0.26				
		Analytical Error ± 0.01				
Normal Isochron	**299.10 ± 2.64 (± 0.88%)**	3.59882 ± 0.01878 (± 0.52%)	**11.52 ± 0.07 (± 0.58%)**	0.49	91.25	
		Full External Error ± 0.27		94%	16	
		Analytical Error ± 0.06		1.76	2σ Confidence Limit	
				1.0000	Error Magnification	
Inverse Isochron	**299.08 ± 2.64 (± 0.88%)**	3.59899 ± 0.01877 (± 0.52%)	**11.52 ± 0.07 (± 0.58%)**	0.49	91.25	
		Full External Error ± 0.27		94%	16	
		Analytical Error ± 0.06		1.76	2σ Confidence Limit	
				1.0000	Error Magnification	
				17%	Spreading Factor	





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

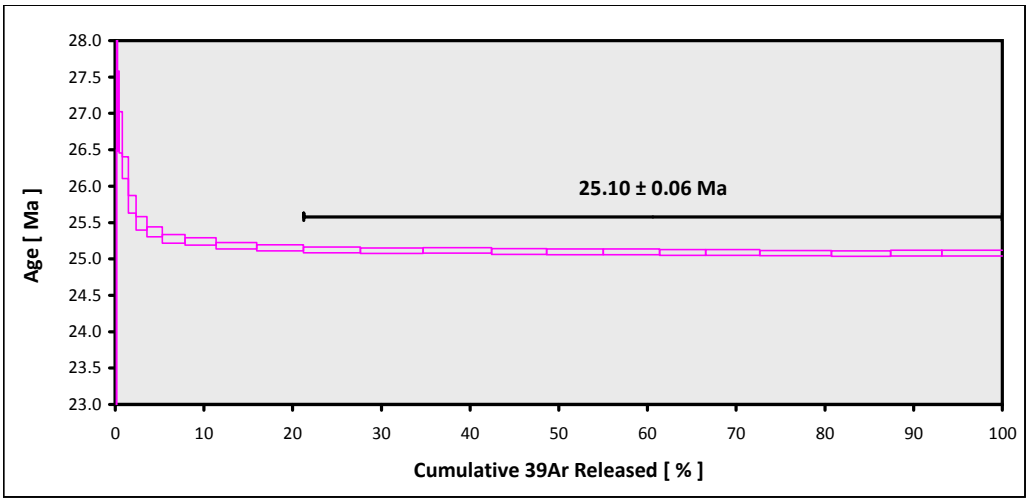
EXP#13D04550 > MV1203-D40-02 > Biotite > MV1203 (13-INT-04)
WALVIS RIDGE > DUSKY GUYOT
13-OSU-05 > Incremental Heating > Susan Schnur

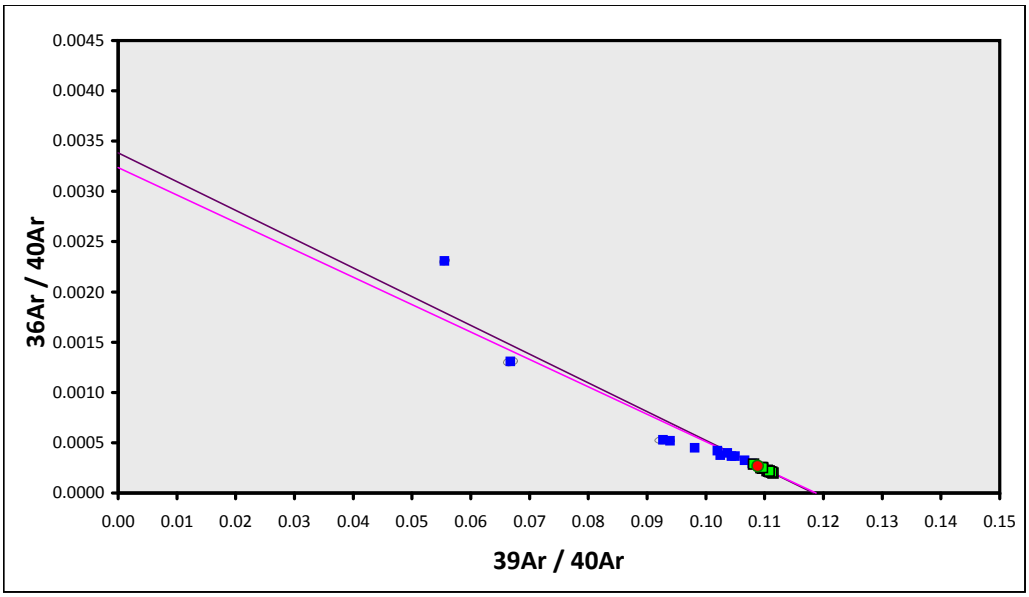
Information on Analysis and Constants Used in Calculations

Project = **MV1203 (13-INT-04)**
Sample = **MV1203-D40-02**
Material = **Biotite**
Location = **Dusky Guyot**
Region = **Walvis Ridge**
Analyst = **Susan Schnur**
Irradiation = **13-OSU-05**
Position = **X: | Y: | Z/H: 44.86 mm**
FCT-NM Age = **28.201 ± 0.023 Ma**
FCT-NM Reference = **Kuiper et al (2008)**
FCT-NM 40Ar/39Ar Ratio = **9.50452 ± 0.01055**
FCT-NM J-value = **0.00165368 ± 0.00000184**
Air Shot 40Ar/36Ar = **302.8320 ± 0.2907**
Air Shot MDF = **0.99393932 ± 0.00062459 (LIN)**
Experiment Type = **Incremental Heating**
Extraction Method = **Bulk Laser Heating**
Heating = **60 sec**
Isolation = **5.52 min**
Instrument = **ARGUS-VI-D**
Preferred Age = **Plateau Age**
Age Classification = **Eruption Age**
IGSN = **IESRS0020**
Rock Class = **Igneous>Volcanic>Mafic**
Lithology = **Trachyandesite**
Lat-Lon = **37°55.1'S - 6°53.2'W**
Age Equations = **Min et al. (2000)**
Negative Intensities = **Allowed**
Collector Calibrations = **40Ar 36Ar**
Decay 40K = **5.530 ± 0.048 E-10 1/a**
Decay 39Ar = **2.940 ± 0.016 E-07 1/h**
Decay 37Ar = **8.230 ± 0.012 E-04 1/h**
Decay 36Cl = **2.257 ± 0.015 E-06 1/a**
Decay 40K(EC,β^+) = **0.580 ± 0.009 E-10 1/a**
Decay 40K(β^-) = **4.950 ± 0.043 E-10 1/a**
Atmospheric 40/36(a) = **295.50**
Atmospheric 38/36(a) = **0.1869**
Production 39/37(ca) = **0.0006730**
Production 38/37(ca) = **0.0001390**
Production 36/37(ca) = **0.0002640**
Production 40/39(k) = **0.001010**
Production 38/39(k) = **0.011380**
Production 36/38(cl) = **262.80 ± 1.71**
Scaling Ratio K/Ca = **0.430**
Abundance Ratio 40K/K = **1.1700 ± 0.0100 E-04**
Atomic Weight K = **39.0983 ± 0.0001 g**

Slight downwards slant, but age seems acceptable.

Results	40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD	39Ar(k) (%,n)	K/Ca ± 2σ
Age Plateau		8.45056 ± 0.00374	**25.10 ± 0.06**	0.71	78.78	26.6 ± 2.5
		± 0.04%	**± 0.22%**	73%	12	
		Full External Error ± 0.57		1.85	2σ Confidence Limit	
		Analytical Error ± 0.01		1.0000	Error Magnification	
Total Fusion Age		8.46425 ± 0.00337	**25.14 ± 0.06**		24	30.0 ± 3.4
		± 0.04%	**± 0.22%**			
		Full External Error ± 0.57				
		Analytical Error ± 0.01				
Normal Isochron	**308.64 ± 15.56**	8.42292 ± 0.03292	**25.01 ± 0.11**	0.48	78.78	
	± 5.04%	± 0.39%	**± 0.45%**	91%	12	
		Full External Error ± 0.57		1.89	2σ Confidence Limit	
		Analytical Error ± 0.10		1.0000	Error Magnification	
Inverse Isochron	**308.91 ± 15.54**	8.42237 ± 0.03292	**25.01 ± 0.11**	0.48	78.78	
Clustered Points	**± 5.03%**	± 0.39%	**± 0.45%**	91%	12	
		Full External Error ± 0.57		1.89	2σ Confidence Limit	
		Analytical Error ± 0.10		1.0000	Error Magnification	
				3%	Spreading Factor	





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

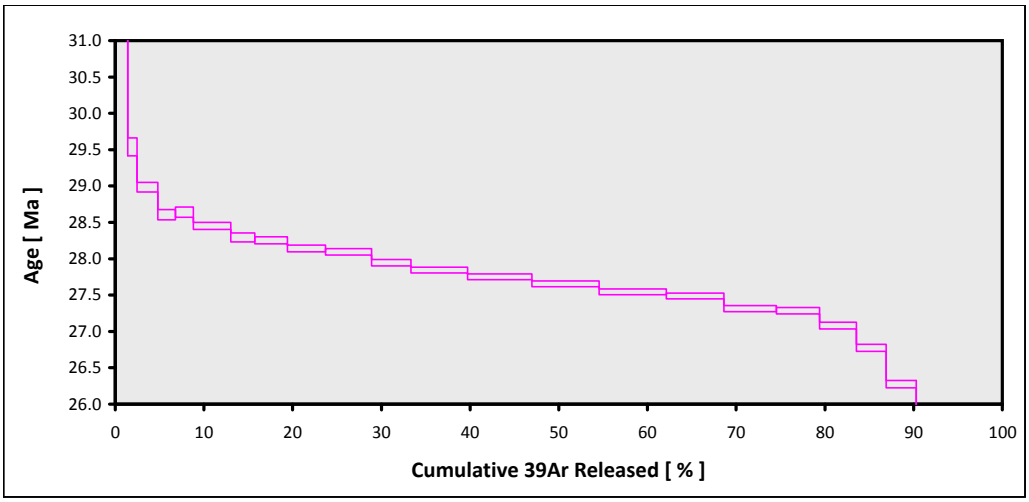
EXP#13D04841 > MV1203-D37-01 > Groundmass > MV1203 (13-INT-04)
WALVIS RIDGE > OMURA GUYOT
13-OSU-05 > Incremental Heating > Susan Schnur

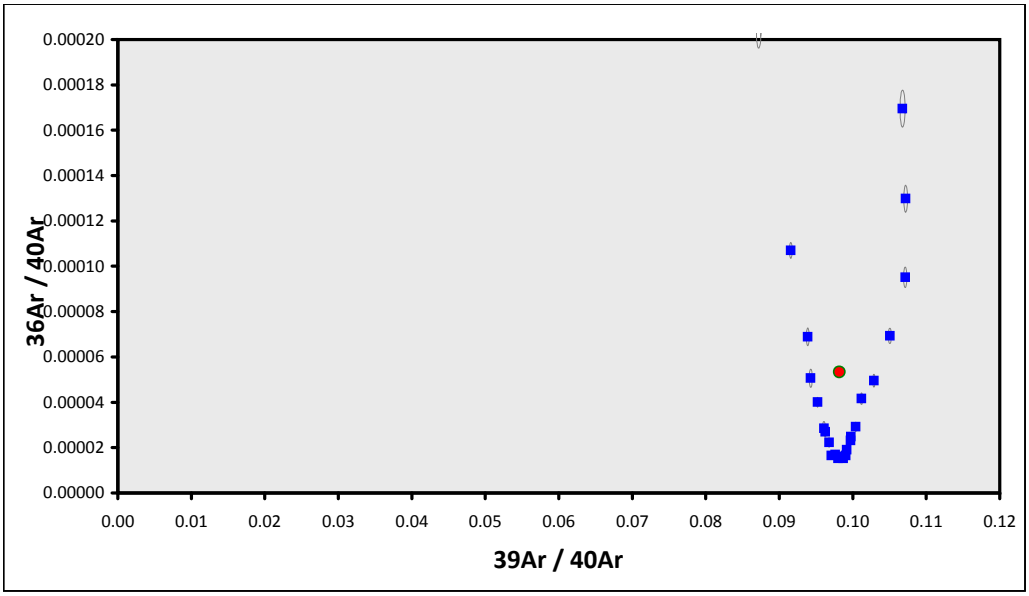
Information on Analysis and Constants Used in Calculations

Project = **MV1203 (13-INT-04)**
Sample = **MV1203-D37-01**
Material = **Groundmass**
Location = **Omura Guyot**
Region = **Walvis Ridge**
Analyst = **Susan Schnur**
Irradiation = **13-OSU-05**
Position = **X: | Y: | Z/H: 68.5 mm**
FCT-NM Age = **28.201 ± 0.023 Ma**
FCT-NM Reference = **Kuiper et al (2008)**
FCT-NM 40Ar/39Ar Ratio = **10.28683 ± 0.01152**
FCT-NM J-value = **0.00152791 ± 0.00000171**
Air Shot 40Ar/36Ar = **302.7610 ± 0.2846**
Air Shot MDF = **0.99399660 ± 0.00062292 (LIN)**
Experiment Type = **Incremental Heating**
Extraction Method = **Bulk Laser Heating**
Heating = **77 sec**
Isolation = **5.52 min**
Instrument = **ARGUS-VI-D**
Preferred Age = Undefined
Age Classification = Undefined
IGSN = **IESRS0021**
Rock Class = **Igneous>Volcanic>Mafic**
Lithology = **Trachybasalt**
Lat-Lon = **37°33.0'S - 8°27.1'W**
Age Equations = **Min et al. (2000)**
Negative Intensities = **Allowed**
Collector Calibrations = **40Ar 36Ar**
Decay 40K = **5.530 ± 0.048 E-10 1/a**
Decay 39Ar = **2.940 ± 0.016 E-07 1/h**
Decay 37Ar = **8.230 ± 0.012 E-04 1/h**
Decay 36Cl = **2.257 ± 0.015 E-06 1/a**
Decay 40K(EC,β^+) = **0.580 ± 0.009 E-10 1/a**
Decay 40K(β^-) = **4.950 ± 0.043 E-10 1/a**
Atmospheric 40/36(a) = **295.50**
Atmospheric 38/36(a) = **0.1869**
Production 39/37(ca) = **0.0006756 ± 0.0000089**
Production 38/37(ca) = **0.0000718 ± 0.0000092**
Production 36/37(ca) = **0.0002663 ± 0.0000004**
Production 40/39(k) = **0.003823 ± 0.000102**
Production 38/39(k) = **0.012031 ± 0.000019**
Production 36/38(cl) = **262.80 ± 1.71**
Scaling Ratio K/Ca = **0.430**
Abundance Ratio 40K/K = **1.1700 ± 0.0100 E-04**
Atomic Weight K = **39.0983 ± 0.0001 g**

Slanting strongly downwards, high MSWD

Results	40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD	39Ar(k) (%,n)	K/Ca ± 2σ
Age Plateau						
Cannot Calculate						
Total Fusion Age		10.02645 ± 0.00373 ± 0.04%	**27.49 ± 0.06 ± 0.23%**		27	0.289 ± 0.001
			Full External Error ± 0.62			
			Analytical Error ± 0.01			
Normal Isochron						
Cannot Calculate						
Inverse Isochron						
Cannot Calculate						





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

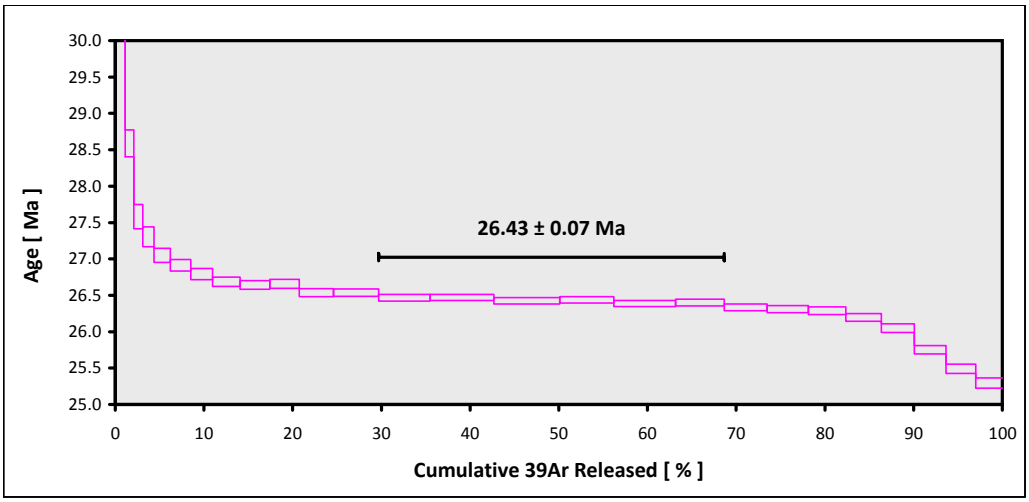
EXP#13D04878 > MV1203-D38-02B > Groundmass > MV1203 (13-INT-04)
WALVIS RIDGE > HECTOR GUYOT
13-OSU-05 > Incremental Heating > Susan Schnur

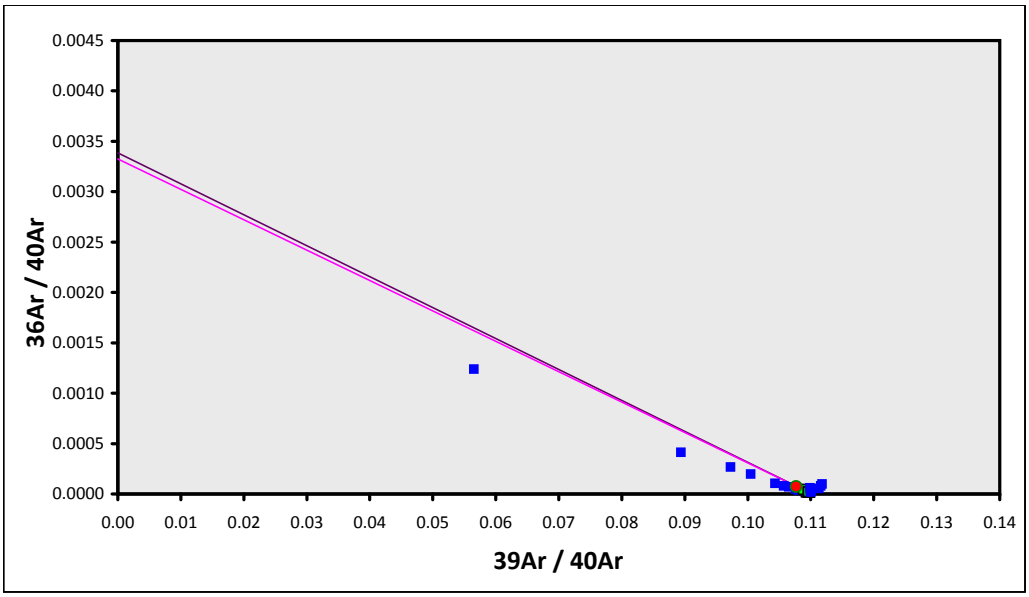
Information on Analysis and Constants Used in Calculations

Project = **MV1203 (13-INT-04)**
Sample = **MV1203-D38-02B**
Material = **Groundmass**
Location = **Hector Guyot**
Region = **Walvis Ridge**
Analyst = **Susan Schnur**
Irradiation = **13-OSU-05**
Position = **X: | Y: | Z/H: 51.02 mm**
FCT-NM Age = **28.201 ± 0.023 Ma**
FCT-NM Reference = **Kuiper et al (2008)**
FCT-NM 40Ar/39Ar Ratio = **9.68470 ± 0.01152**
FCT-NM J-value = **0.00162291 ± 0.00000193**
Air Shot 40Ar/36Ar = **302.8040 ± 0.2816**
Air Shot MDF = **0.99396190 ± 0.00062193 (LIN)**
Experiment Type = **Incremental Heating**
Extraction Method = **Bulk Laser Heating**
Heating = **77 sec**
Isolation = **5.52 min**
Instrument = **ARGUS-VI-D**
Preferred Age = **Plateau Age**
Age Classification = **Eruption Age**
IGSN = **IESRS0022**
Rock Class = **Igneous>Volcanic>Mafic**
Lithology = **Basalt**
Lat-Lon = **37°47.2'S - 8°52.3'W**
Age Equations = **Min et al. (2000)**
Negative Intensities = **Allowed**
Collector Calibrations = **40Ar 36Ar**
Decay 40K = **5.530 ± 0.048 E-10 1/a**
Decay 39Ar = **2.940 ± 0.016 E-07 1/h**
Decay 37Ar = **8.230 ± 0.012 E-04 1/h**
Decay 36Cl = **2.257 ± 0.015 E-06 1/a**
Decay 40K(EC,β^+) = **0.580 ± 0.009 E-10 1/a**
Decay 40K(β^-) = **4.950 ± 0.043 E-10 1/a**
Atmospheric 40/36(a) = **295.50**
Atmospheric 38/36(a) = **0.1869**
Production 39/37(ca) = **0.0006756 ± 0.0000089**
Production 38/37(ca) = **0.0000718 ± 0.0000092**
Production 36/37(ca) = **0.0002663 ± 0.0000004**
Production 40/39(k) = **0.003823 ± 0.000102**
Production 38/39(k) = **0.012031 ± 0.000019**
Production 36/38(cl) = **262.80 ± 1.71**
Scaling Ratio K/Ca = **0.430**
Abundance Ratio 40K/K = **1.1700 ± 0.0100 E-04**
Atomic Weight K = **39.0983 ± 0.0001 g**

Slanting downwards but age probably acceptable.

Results	40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD	39Ar(k) (%,n)	K/Ca ± 2σ
Age Plateau		9.07248 ± 0.00984	**26.43 ± 0.07**	2.59	38.97	0.303 ± 0.012
Error Mean		± 0.11%	**± 0.26%**	2%	6	
		Full External Error ± 0.60		2.26	2σ Confidence Limit	
		Analytical Error ± 0.03		1.6103	Error Magnification	
Total Fusion Age		9.08857 ± 0.00399	**26.48 ± 0.06**		26	0.233 ± 0.001
		± 0.04%	**± 0.24%**			
		Full External Error ± 0.60				
		Analytical Error ± 0.01				
Normal Isochron	**319.36 ± 130.39**	9.06600 ± 0.03035	**26.41 ± 0.11**	3.25	38.97	
Error Chron	**± 40.83%**	± 0.33%	**± 0.41%**	1%	6	
		Full External Error ± 0.60		2.41	2σ Confidence Limit	
		Analytical Error ± 0.09		1.8024	Error Magnification	
Inverse Isochron	**300.78 ± 121.37**	9.07138 ± 0.03009	**26.43 ± 0.11**	3.24	38.97	
Error Chron	**± 40.35%**	± 0.33%	**± 0.41%**	1%	6	
		Full External Error ± 0.60		2.41	2σ Confidence Limit	
		Analytical Error ± 0.09		1.7988	Error Magnification	
				1%	Spreading Factor	





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

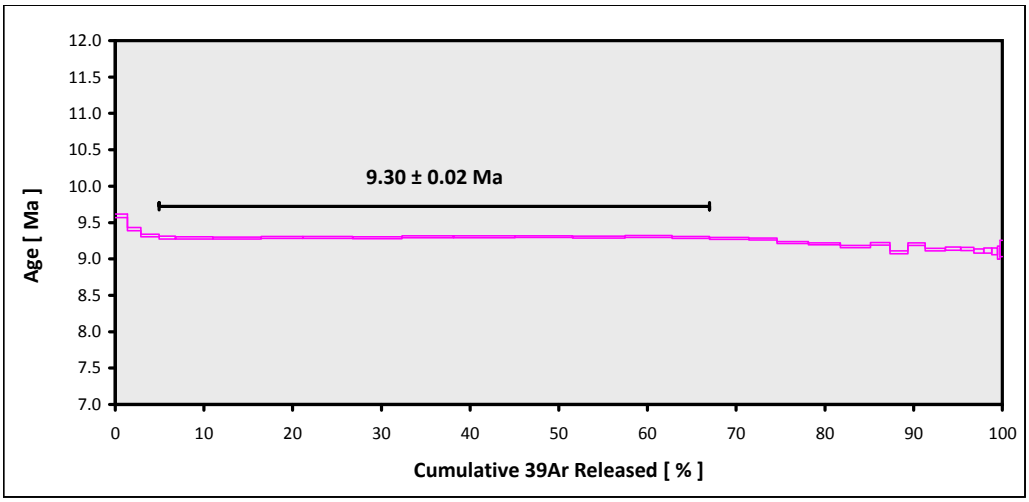
EXP#13D05038 > MV1203-D42-17 (LIGHT) > Groundmass > MV1203 (13-INT-04)
WALVIS RIDGE > ESK GUYOT
13-OSU-05 > Incremental Heating > Susan Schnur

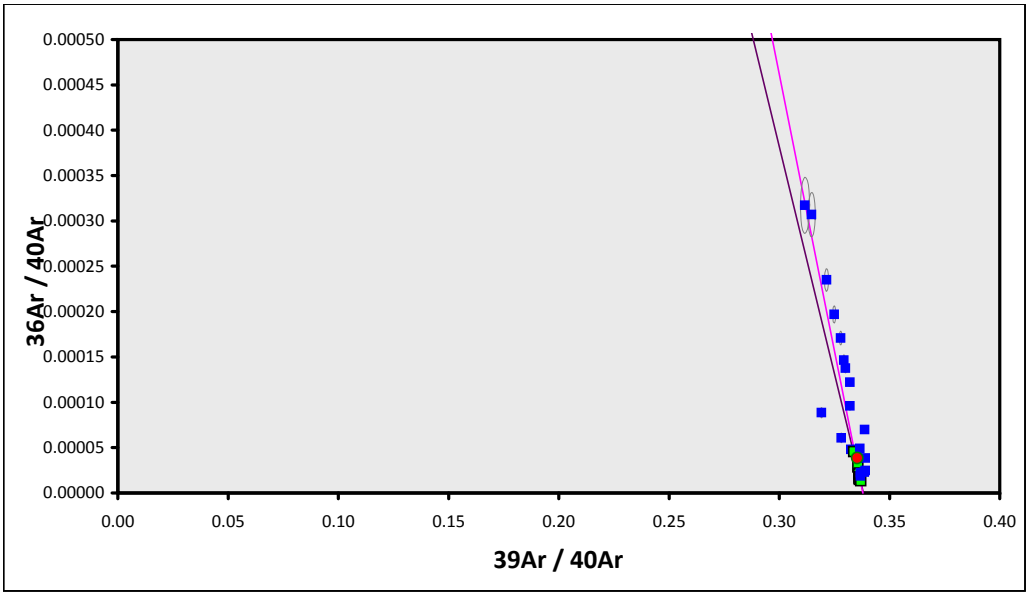
Information on Analysis and Constants Used in Calculations

Project = **MV1203 (13-INT-04)**
Sample = **MV1203-D42-17 (LIGHT)**
Material = **Groundmass**
Location = **Esk Guyot**
Region = **Walvis Ridge**
Analyst = **Susan Schnur**
Irradiation = **13-OSU-05**
Position = **X: | Y: | Z/H: 21.95 mm**
FCT-NM Age = **28.201 ± 0.023 Ma**
FCT-NM Reference = **Kuiper et al (2008)**
FCT-NM 40Ar/39Ar Ratio = **9.01513 ± 0.01154**
FCT-NM J-value = **0.00174345 ± 0.00000223**
Air Shot 40Ar/36Ar = **302.8040 ± 0.2786**
Air Shot MDF = **0.99396190 ± 0.00062105 (LIN)**
Experiment Type = **Incremental Heating**
Extraction Method = **Bulk Laser Heating**
Heating = **77 sec**
Isolation = **5.52 min**
Instrument = **ARGUS-VI-D**
Preferred Age = **Plateau Age**
Age Classification = **Eruption Age**
IGSN = **IESRS0023**
Rock Class = **Igneous>Volcanic>Mafic**
Lithology = **Trachyte**
Lat-Lon = **38°41.2'S - 11°48.1'W**
Age Equations = **Min et al. (2000)**
Negative Intensities = **Allowed**
Collector Calibrations = **40Ar 36Ar**
Decay 40K = **5.530 ± 0.048 E-10 1/a**
Decay 39Ar = **2.940 ± 0.016 E-07 1/h**
Decay 37Ar = **8.230 ± 0.012 E-04 1/h**
Decay 36Cl = **2.257 ± 0.015 E-06 1/a**
Decay 40K(EC,β^+) = **0.580 ± 0.009 E-10 1/a**
Decay 40K(β^-) = **4.950 ± 0.043 E-10 1/a**
Atmospheric 40/36(a) = **295.50**
Atmospheric 38/36(a) = **0.1869**
Production 39/37(ca) = **0.0006756 ± 0.0000089**
Production 38/37(ca) = **0.0000718 ± 0.0000092**
Production 36/37(ca) = **0.0002663 ± 0.0000004**
Production 40/39(k) = **0.003823 ± 0.000102**
Production 38/39(k) = **0.012031 ± 0.000019**
Production 36/38(cl) = **262.80 ± 1.71**
Scaling Ratio K/Ca = **0.430**
Abundance Ratio 40K/K = **1.1700 ± 0.0100 E-04**
Atomic Weight K = **39.0983 ± 0.0001 g**

Light fraction is cleaner. Good plateau.

Results	40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD	39Ar(k) (%,n)	K/Ca ± 2σ
Age Plateau		2.95676 ± 0.00132 (± 0.04%)	**9.30 ± 0.02 (± 0.26%)**	1.16	62.05	5.75 ± 0.11
			Full External Error ± 0.21	31%	12	
			Analytical Error ± 0.00	1.85	2σ Confidence Limit	
				1.0748	Error Magnification	
Total Fusion Age		2.94784 ± 0.00094 (± 0.03%)	**9.27 ± 0.02 (± 0.26%)**		31	5.01 ± 0.08
			Full External Error ± 0.21			
			Analytical Error ± 0.00			
Normal Isochron	**224.80 ± 58.81 (± 26.16%)**	2.96094 ± 0.00365 (± 0.12%)	**9.31 ± 0.03 (± 0.28%)**	1.00	62.05	
			Full External Error ± 0.21	44%	12	
			Analytical Error ± 0.01	1.89	2σ Confidence Limit	
				1.0013	Error Magnification	
Inverse Isochron	**242.76 ± 55.49 (± 22.86%)**	2.95983 ± 0.00364 (± 0.12%)	**9.31 ± 0.03 (± 0.28%)**	0.96	62.05	
Clustered Points			Full External Error ± 0.21	48%	12	
			Analytical Error ± 0.01	1.89	2σ Confidence Limit	
				1.0000	Error Magnification	
				1%	Spreading Factor	





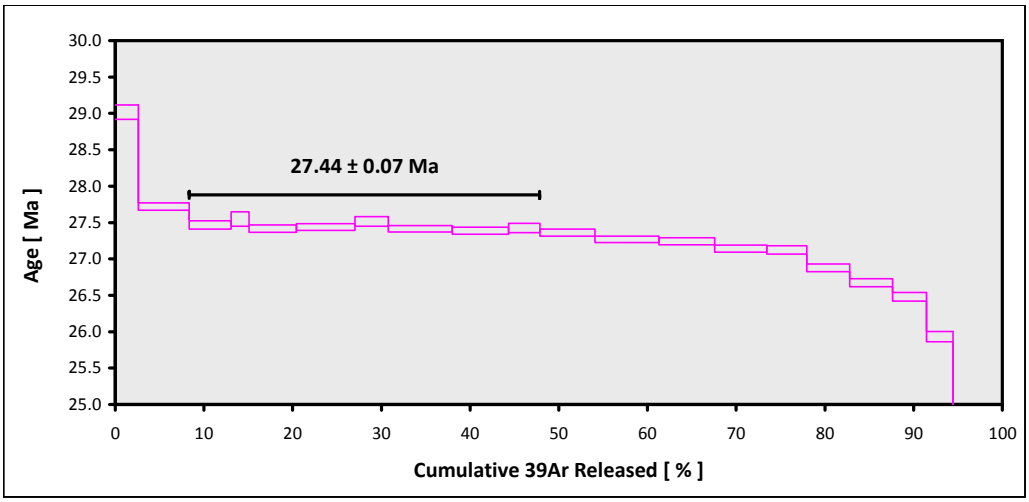
EXP#13D05091 > MV1203-D37-03 > Groundmass > MV1203 (13-INT-04)
WALVIS RIDGE > OMURA GUYOT
13-OSU-05 > Incremental Heating > Susan Schnur

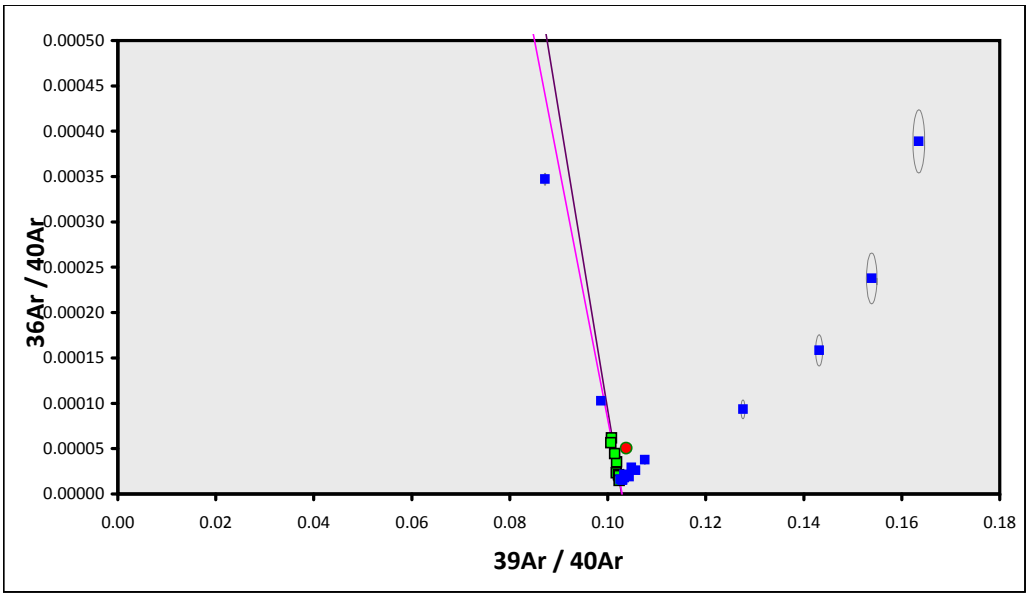
Information on Analysis and Constants Used in Calculations

Project = **MV1203 (13-INT-04)**
Sample = **MV1203-D37-03**
Material = **Groundmass**
Location = **Omura Guyot**
Region = **Walvis Ridge**
Analyst = **Susan Schnur**
Irradiation = **13-OSU-05**
Position = **X: | Y: | Z/H: 60.78 mm**
FCT-NM Age = **28.201 ± 0.023 Ma**
FCT-NM Reference = **Kuiper et al (2008)**
FCT-NM 40Ar/39Ar Ratio = **10.00243 ± 0.01150**
FCT-NM J-value = **0.00157136 ± 0.00000181**
Air Shot 40Ar/36Ar = **302.7670 ± 0.2846**
Air Shot MDF = **0.99399176 ± 0.00062291 (LIN)**
Experiment Type = **Incremental Heating**
Extraction Method = **Bulk Laser Heating**
Heating = **77 sec**
Isolation = **5.52 min**
Instrument = **ARGUS-VI-D**
Preferred Age = **Plateau Age**
Age Classification = **Eruption Age**
IGSN = **IESRS0024**
Rock Class = **Igneous>Volcanic>Mafic**
Lithology = **Basalt**
Lat-Lon = **37°33.0'S - 8°27.1'W**
Age Equations = **Min et al. (2000)**
Negative Intensities = **Allowed**
Collector Calibrations = **40Ar 36Ar**
Decay 40K = **5.530 ± 0.048 E-10 1/a**
Decay 39Ar = **2.940 ± 0.016 E-07 1/h**
Decay 37Ar = **8.230 ± 0.012 E-04 1/h**
Decay 36Cl = **2.257 ± 0.015 E-06 1/a**
Decay 40K(EC,β^+) = **0.580 ± 0.009 E-10 1/a**
Decay 40K(β^-) = **4.950 ± 0.043 E-10 1/a**
Atmospheric 40/36(a) = **295.50**
Atmospheric 38/36(a) = **0.1869**
Production 39/37(ca) = **0.0006756 ± 0.0000089**
Production 38/37(ca) = **0.0000718 ± 0.0000092**
Production 36/37(ca) = **0.0002663 ± 0.0000004**
Production 40/39(k) = **0.003823 ± 0.000102**
Production 38/39(k) = **0.012031 ± 0.000019**
Production 36/38(cl) = **262.80 ± 1.71**
Scaling Ratio K/Ca = **0.430**
Abundance Ratio 40K/K = **1.1700 ± 0.0100 E-04**
Atomic Weight K = **39.0983 ± 0.0001 g**

Slanting downwards but age probably acceptable.

Results	40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD	39Ar(k) (%,n)	K/Ca ± 2σ
Age Plateau		9.72907 ± 0.01113	**27.44 ± 0.07**	2.61	39.52	0.303 ± 0.018
Error Mean		± 0.11%	**± 0.25%**	1%	8	
		Full External Error ± 0.62		2.07	2σ Confidence Limit	
		Analytical Error ± 0.03		1.6146	Error Magnification	
Total Fusion Age		9.49398 ± 0.00450	**26.78 ± 0.06**		25	0.194 ± 0.001
		± 0.05%	**± 0.23%**			
		Full External Error ± 0.61				
		Analytical Error ± 0.01				
Normal Isochron	**334.80 ± 65.07**	9.71612 ± 0.02306	**27.40 ± 0.09**	1.94	39.52	
	± 19.43%	± 0.24%	**± 0.33%**	7%	8	
		Full External Error ± 0.62		2.15	2σ Confidence Limit	
		Analytical Error ± 0.06		1.3916	Error Magnification	
Inverse Isochron	**347.45 ± 68.37**	9.71236 ± 0.02455	**27.39 ± 0.09**	2.18	39.52	
Error Chron	**± 19.68%**	± 0.25%	**± 0.34%**	4%	8	
		Full External Error ± 0.62		2.15	2σ Confidence Limit	
		Analytical Error ± 0.07		1.4766	Error Magnification	
				2%	Spreading Factor	





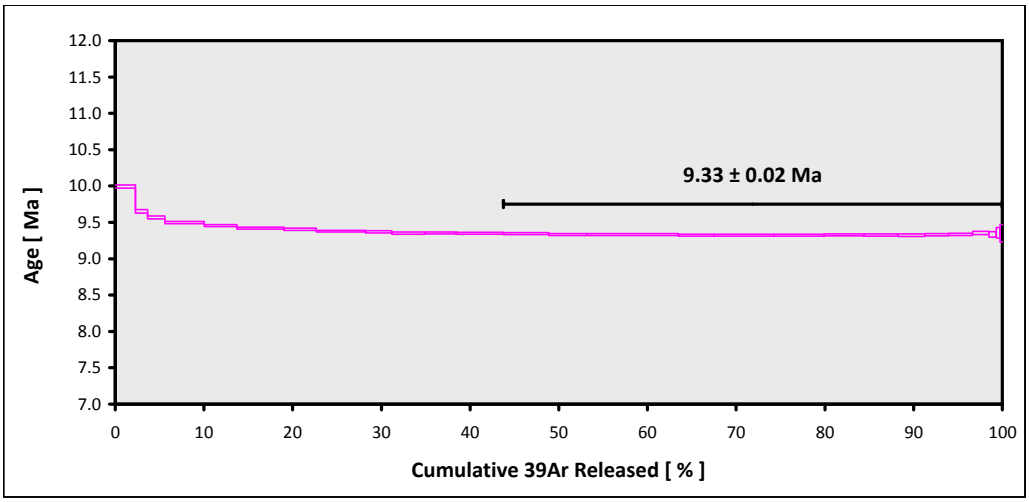
EXP#13D05173 > MV1203-D42-08 > Groundmass > MV1203 (13-INT-04)
WALVIS RIDGE > ESK GUYOT
13-OSU-05 > Incremental Heating > Susan Schnur

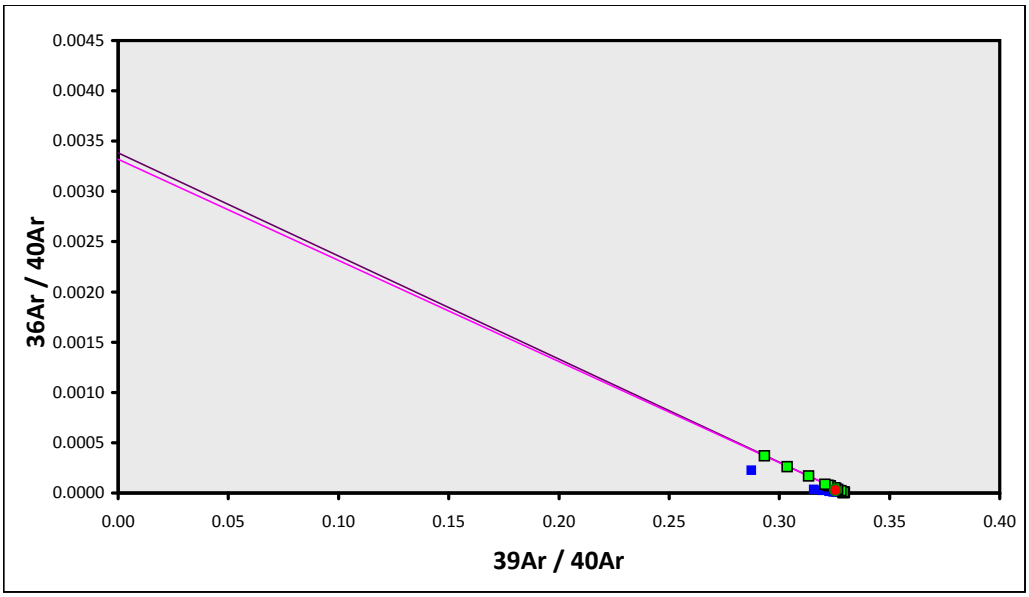
Information on Analysis and Constants Used in Calculations

Project = **MV1203 (13-INT-04)**
Sample = **MV1203-D42-08**
Material = **Groundmass**
Location = **Esk Guyot**
Region = **Walvis Ridge**
Analyst = **Susan Schnur**
Irradiation = **13-OSU-05**
Position = **X: | Y: | Z/H: 32.46 mm**
FCT-NM Age = **28.201 ± 0.023 Ma**
FCT-NM Reference = **Kuiper et al (2008)**
FCT-NM 40Ar/39Ar Ratio = **9.20938 ± 0.01151**
FCT-NM J-value = **0.00170667 ± 0.00000213**
Air Shot 40Ar/36Ar = **302.7690 ± 0.2846**
Air Shot MDF = **0.99399014 ± 0.00062290 (LIN)**
Experiment Type = **Incremental Heating**
Extraction Method = **Bulk Laser Heating**
Heating = **77 sec**
Isolation = **5.52 min**
Instrument = **ARGUS-VI-D**
Preferred Age = **Plateau Age**
Age Classification = **Eruption Age**
IGSN = **IESRS0026**
Rock Class = **Igneous>Volcanic>Mafic**
Lithology = **Trachyte**
Lat-Lon = **38°41.2'S - 11°48.1'W**
Age Equations = **Min et al. (2000)**
Negative Intensities = **Allowed**
Collector Calibrations = **40Ar 36Ar**
Decay 40K = **5.530 ± 0.048 E-10 1/a**
Decay 39Ar = **2.940 ± 0.016 E-07 1/h**
Decay 37Ar = **8.230 ± 0.012 E-04 1/h**
Decay 36Cl = **2.257 ± 0.015 E-06 1/a**
Decay 40K(EC,β^+) = **0.580 ± 0.009 E-10 1/a**
Decay 40K(β^-) = **4.950 ± 0.043 E-10 1/a**
Atmospheric 40/36(a) = **295.50**
Atmospheric 38/36(a) = **0.1869**
Production 39/37(ca) = **0.0006756 ± 0.0000089**
Production 38/37(ca) = **0.0000718 ± 0.0000092**
Production 36/37(ca) = **0.0002663 ± 0.0000004**
Production 40/39(k) = **0.003823 ± 0.000102**
Production 38/39(k) = **0.012031 ± 0.000019**
Production 36/38(cl) = **262.80 ± 1.71**
Scaling Ratio K/Ca = **0.430**
Abundance Ratio 40K/K = **1.1700 ± 0.0100 E-04**
Atomic Weight K = **39.0983 ± 0.0001 g**

Slightly bowl-shaped but age probably acceptable.

Results	40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD	39Ar(k) (%,n)	K/Ca ± 2σ
Age Plateau		3.03125 ± 0.00143	**9.33 ± 0.02**	1.13	56.24	5.14 ± 0.23
		± 0.05%	**± 0.25%**	32%	15	
		Full External Error ± 0.21		1.76	2σ Confidence Limit	
		Analytical Error ± 0.00		1.0643	Error Magnification	
Total Fusion Age		3.04759 ± 0.00101	**9.38 ± 0.02**		27	5.38 ± 0.09
		± 0.03%	**± 0.25%**			
		Full External Error ± 0.21				
		Analytical Error ± 0.00				
Normal Isochron	**291.15 ± 15.14**	3.03275 ± 0.00220	**9.34 ± 0.02**	1.59	56.24	
	± 5.20%	± 0.07%	**± 0.26%**	8%	15	
		Full External Error ± 0.21		1.78	2σ Confidence Limit	
		Analytical Error ± 0.01		1.2617	Error Magnification	
Inverse Isochron	**301.19 ± 12.94**	3.03071 ± 0.00190	**9.33 ± 0.02**	1.15	56.24	
	± 4.30%	± 0.06%	**± 0.26%**	31%	15	
		Full External Error ± 0.21		1.78	2σ Confidence Limit	
		Analytical Error ± 0.01		1.0725	Error Magnification	
				11%	Spreading Factor	





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

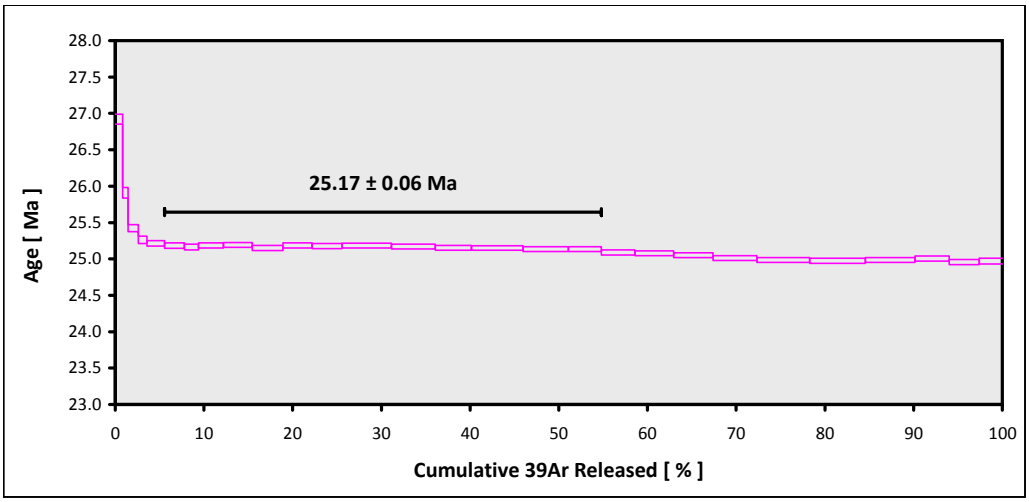
EXP#13D05257 > MV1203-D40-25 > Groundmass > MV1203 (13-INT-04)
WALVIS RIDGE > DUSKY GUYOT
13-OSU-05 > Incremental Heating > Susan Schnur

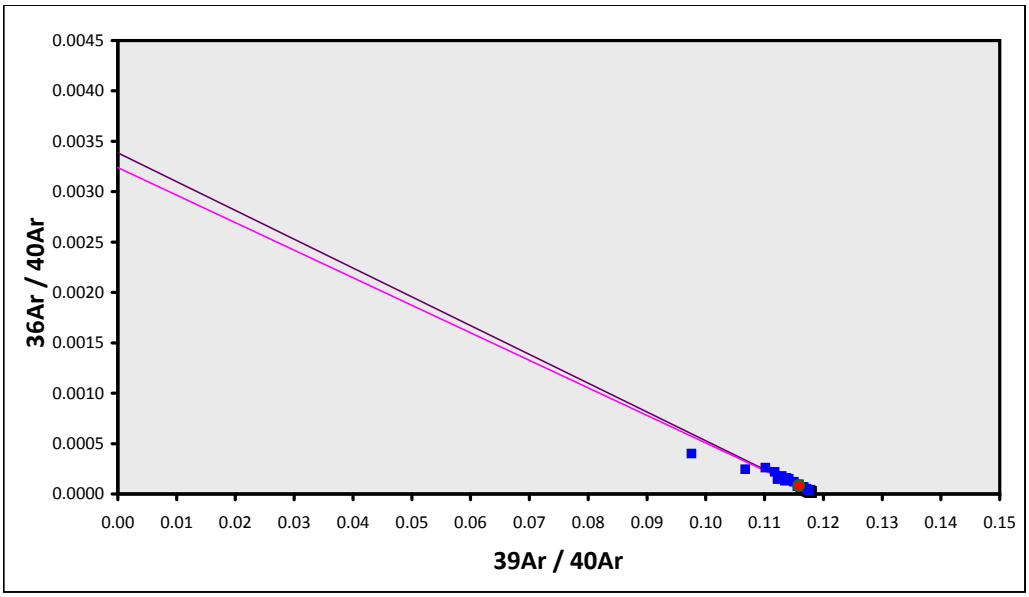
Information on Analysis and Constants Used in Calculations

Project = **MV1203 (13-INT-04)**
Sample = **MV1203-D40-25**
Material = **Groundmass**
Location = **Dusky Guyot**
Region = **Walvis Ridge**
Analyst = **Susan Schnur**
Irradiation = **13-OSU-05**
Position = **X: | Y: | Z/H: 43.3 mm**
FCT-NM Age = **28.201 ± 0.023 Ma**
FCT-NM Reference = **Kuiper et al (2008)**
FCT-NM 40Ar/39Ar Ratio = **9.46647 ± 0.01155**
FCT-NM J-value = **0.00166032 ± 0.00000203**
Air Shot 40Ar/36Ar = **302.7960 ± 0.2786**
Air Shot MDF = **0.99396836 ± 0.00062106 (LIN)**
Experiment Type = **Incremental Heating**
Extraction Method = **Bulk Laser Heating**
Heating = **77 sec**
Isolation = **5.52 min**
Instrument = **ARGUS-VI-D**
Preferred Age = **Plateau Age**
Age Classification = **Eruption Age**
IGSN = **IESRS0028**
Rock Class = **Igneous>Volcanic>Mafic**
Lithology = **Trachyte**
Lat-Lon = **37°55.1'S - 6°53.2'W**
Age Equations = **Min et al. (2000)**
Negative Intensities = **Allowed**
Collector Calibrations = **40Ar 36Ar**
Decay 40K = **5.530 ± 0.048 E-10 1/a**
Decay 39Ar = **2.940 ± 0.016 E-07 1/h**
Decay 37Ar = **8.230 ± 0.012 E-04 1/h**
Decay 36Cl = **2.257 ± 0.015 E-06 1/a**
Decay 40K(EC,β^+) = **0.580 ± 0.009 E-10 1/a**
Decay 40K(β^-) = **4.950 ± 0.043 E-10 1/a**
Atmospheric 40/36(a) = **295.50**
Atmospheric 38/36(a) = **0.1869**
Production 39/37(ca) = **0.0006756 ± 0.0000089**
Production 38/37(ca) = **0.0000718 ± 0.0000092**
Production 36/37(ca) = **0.0002663 ± 0.0000004**
Production 40/39(k) = **0.003823 ± 0.000102**
Production 38/39(k) = **0.012031 ± 0.000019**
Production 36/38(cl) = **262.80 ± 1.71**
Scaling Ratio K/Ca = **0.430**
Abundance Ratio 40K/K = **1.1700 ± 0.0100 E-04**
Atomic Weight K = **39.0983 ± 0.0001 g**

Plateau slanting downwards, not great, but age probably acceptable.

Results	40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD	39Ar(k) (%,n)	K/Ca ± 2σ
Age Plateau		8.44046 ± 0.00375	**25.17 ± 0.06**	1.37	49.23	2.08 ± 0.06
		± 0.04%	**± 0.25%**	17%	13	
		Full External Error ± 0.57		1.82	2σ Confidence Limit	
		Analytical Error ± 0.01		1.1707	Error Magnification	
Total Fusion Age		8.42446 ± 0.00238	**25.12 ± 0.06**		28	1.92 ± 0.01
		± 0.03%	**± 0.24%**			
		Full External Error ± 0.57				
		Analytical Error ± 0.01				
Normal Isochron	**303.22 ± 33.35**	8.43876 ± 0.00919	**25.16 ± 0.07**	1.43	49.23	
	± 11.00%	± 0.11%	**± 0.27%**	15%	13	
		Full External Error ± 0.57		1.85	2σ Confidence Limit	
		Analytical Error ± 0.03		1.1960	Error Magnification	
Inverse Isochron	**308.73 ± 32.69**	8.43716 ± 0.00914	**25.16 ± 0.07**	1.41	49.23	
Clustered Points	**± 10.59%**	± 0.11%	**± 0.27%**	16%	13	
		Full External Error ± 0.57		1.85	2σ Confidence Limit	
		Analytical Error ± 0.03		1.1885	Error Magnification	
				1%	Spreading Factor	





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

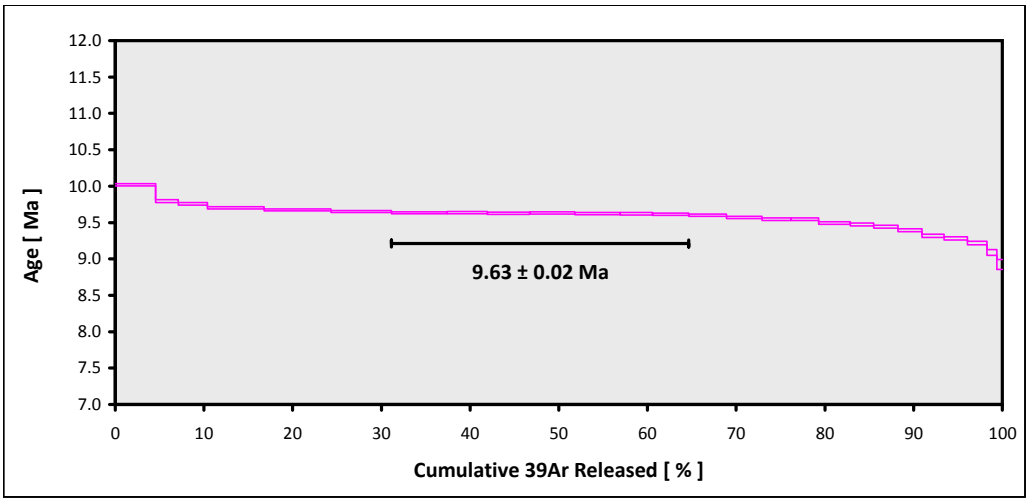
EXP#13D05296 > MV1203-D42-04 > Groundmass > MV1203 (13-INT-04)
WALVIS RIDGE > ESK GUYOT
13-OSU-05 > Incremental Heating > Susan Schnur

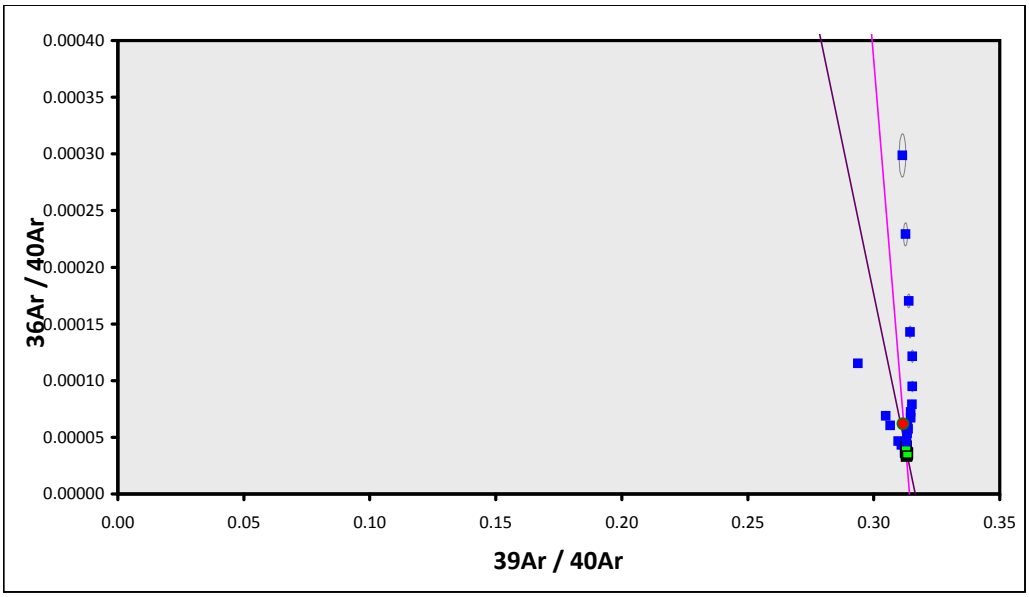
Information on Analysis and Constants Used in Calculations

Project = **MV1203 (13-INT-04)**
Sample = **MV1203-D42-04**
Material = **Groundmass**
Location = **Esk Guyot**
Region = **Walvis Ridge**
Analyst = **Susan Schnur**
Irradiation = **13-OSU-05**
Position = **X: | Y: | Z/H: 36.7 mm**
FCT-NM Age = **28.201 ± 0.023 Ma**
FCT-NM Reference = **Kuiper et al (2008)**
FCT-NM 40Ar/39Ar Ratio = **9.30308 ± 0.01154**
FCT-NM J-value = **0.00168948 ± 0.00000209**
Air Shot 40Ar/36Ar = **302.7950 ± 0.2786**
Air Shot MDF = **0.99396916 ± 0.00062106 (LIN)**
Experiment Type = **Incremental Heating**
Extraction Method = **Bulk Laser Heating**
Heating = **77 sec**
Isolation = **5.52 min**
Instrument = **ARGUS-VI-D**
Preferred Age = **Plateau Age**
Age Classification = **Eruption Age**
IGSN = **IESRS0029**
Rock Class = **Igneous>Volcanic>Mafic**
Lithology = **Basaltic trachyandesite**
Lat-Lon = **38°41.2'S - 11°48.1'W**
Age Equations = **Min et al. (2000)**
Negative Intensities = **Allowed**
Collector Calibrations = **40Ar 36Ar**
Decay 40K = **5.530 ± 0.048 E-10 1/a**
Decay 39Ar = **2.940 ± 0.016 E-07 1/h**
Decay 37Ar = **8.230 ± 0.012 E-04 1/h**
Decay 36Cl = **2.257 ± 0.015 E-06 1/a**
Decay 40K(EC,β^+) = **0.580 ± 0.009 E-10 1/a**
Decay 40K(β^-) = **4.950 ± 0.043 E-10 1/a**
Atmospheric 40/36(a) = **295.50**
Atmospheric 38/36(a) = **0.1869**
Production 39/37(ca) = **0.0006756 ± 0.0000089**
Production 38/37(ca) = **0.0000718 ± 0.0000092**
Production 36/37(ca) = **0.0002663 ± 0.0000004**
Production 40/39(k) = **0.003823 ± 0.000102**
Production 38/39(k) = **0.012031 ± 0.000019**
Production 36/38(cl) = **262.80 ± 1.71**
Scaling Ratio K/Ca = **0.430**
Abundance Ratio 40K/K = **1.1700 ± 0.0100 E-04**
Atomic Weight K = **39.0983 ± 0.0001 g**

Clear recoil pattern, not great.

Results	40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD	39Ar(k) (%,n)	K/Ca ± 2σ
Age Plateau		3.15966 ± 0.00198	**9.63 ± 0.02**	1.10	33.50	0.95 ± 0.02
		± 0.06%	**± 0.26%**	36%	7	
		Full External Error ± 0.22		2.15	2σ Confidence Limit	
		Analytical Error ± 0.01		1.0471	Error Magnification	
Total Fusion Age		3.15020 ± 0.00112	**9.60 ± 0.02**		26	0.70 ± 0.00
		± 0.04%	**± 0.25%**			
		Full External Error ± 0.22				
		Analytical Error ± 0.00				
Normal Isochron	**84.49 ± 207.09**	3.18415 ± 0.02416	**9.70 ± 0.08**	0.81	33.50	
	######## ± 0.76%		**± 0.80%**	54%	7	
		Full External Error ± 0.23		2.26	2σ Confidence Limit	
		Analytical Error ± 0.07		1.0000	Error Magnification	
Inverse Isochron	**94.90 ± 87.78**	3.18296 ± 0.02422	**9.70 ± 0.08**	0.81	33.50	
Clustered Points	**± 92.50%**	± 0.76%	**± 0.80%**	55%	7	
		Full External Error ± 0.23		2.26	2σ Confidence Limit	
		Analytical Error ± 0.07		1.0000	Error Magnification	
				0%	Spreading Factor	





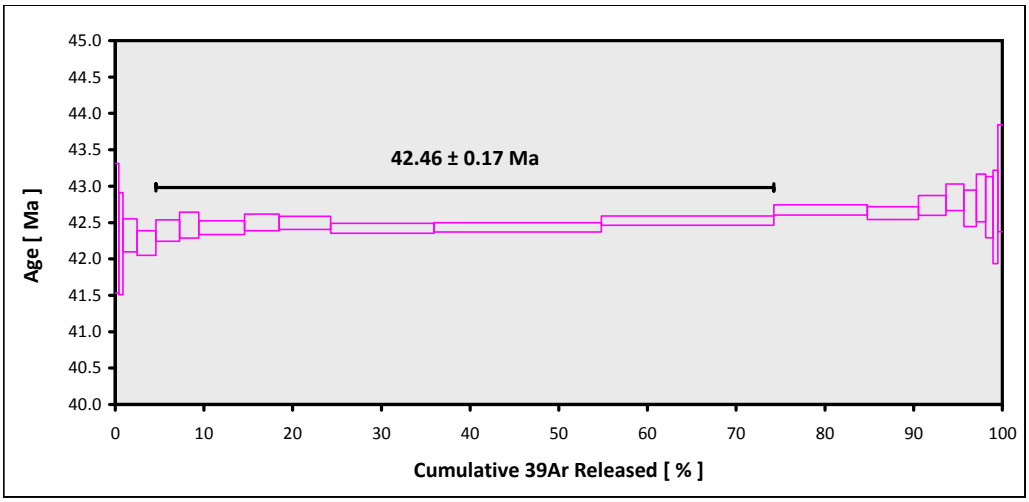
EXP#14D29402 > MV1203-D61-06A > Plagioclase > MV1203 (13-INT-04)
WALVIS RIDGE > MAYBE SEAMOUNT
14-OSU-04 (4B33-14) > Incremental Heating > Susan Schnur

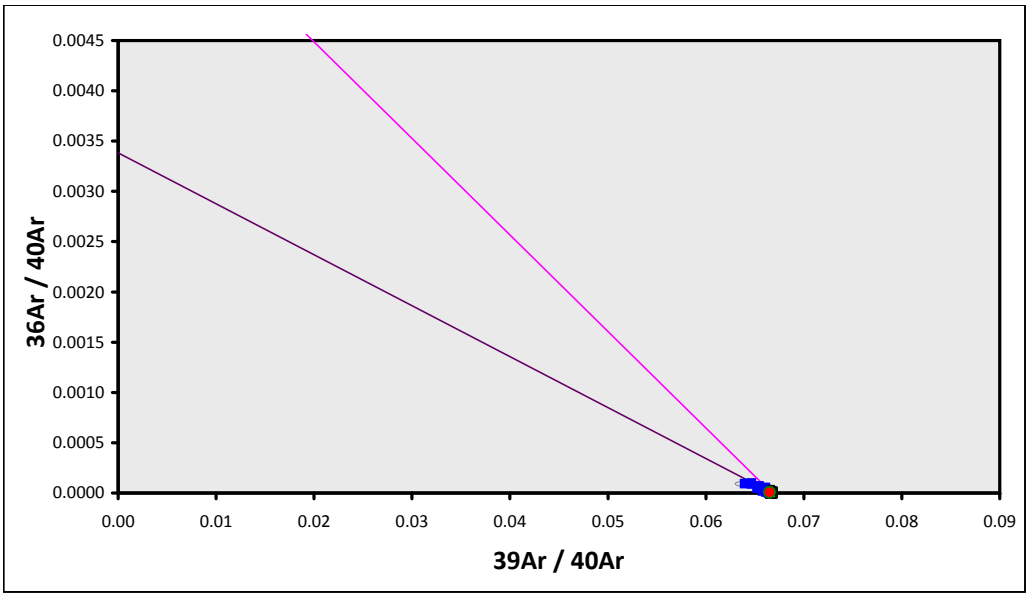
Information on Analysis and Constants Used in Calculations

Project = **MV1203 (13-INT-04)**
Sample = **MV1203-D61-06A**
Material = **Plagioclase**
Location = **Maybe Seamount**
Region = **Walvis Ridge**
Analyst = **Susan Schnur**
Irradiation = **14-OSU-04 (4B33-14)**
Position = **X: 0 | Y: 0 | Z/H: 46.93 mm**
FCT-NM Age = **28.201 ± 0.023 Ma**
FCT-NM Reference = **Kuiper et al 2008**
FCT-NM 40Ar/39Ar Ratio = **9.90880 ± 0.01912**
FCT-NM J-value = **0.00158621 ± 0.00000306**
Air Shot 40Ar/36Ar = **303.5100 ± 0.4795**
Air Shot MDF = **0.99339367 ± 0.00069420 (LIN)**
Experiment Type = **Incremental Heating**
Extraction Method = **Bulk Laser Heating**
Heating = **60 sec**
Isolation = **6.00 min**
Instrument = **ARGUS-VI-D**
Preferred Age = **Plateau Age**
Age Classification = **Eruption Age**
IGSN = **IESRS0030**
Rock Class = **Igneous>Volcanic>Mafic**
Lithology = **Phonolitic-Tephrite**
Lat-Lon = **37°12.1'S - 1°08.5'W**
Age Equations = **Min et al. (2000)**
Negative Intensities = **Allowed**
Collector Calibrations = **40Ar 36Ar**
Decay 40K = **5.530 ± 0.048 E-10 1/a**
Decay 39Ar = **2.940 ± 0.016 E-07 1/h**
Decay 37Ar = **8.230 ± 0.012 E-04 1/h**
Decay 36Cl = **2.257 ± 0.015 E-06 1/a**
Decay 40K(EC,β^+) = **0.580 ± 0.009 E-10 1/a**
Decay 40K(β^-) = **4.950 ± 0.043 E-10 1/a**
Atmospheric 40/36(a) = **295.50**
Atmospheric 38/36(a) = **0.1869**
Production 39/37(ca) = **0.0006756 ± 0.0000089**
Production 38/37(ca) = **0.0000718 ± 0.0000092**
Production 36/37(ca) = **0.0002663 ± 0.0000004**
Production 40/39(k) = **0.003823 ± 0.000102**
Production 38/39(k) = **0.012031 ± 0.000019**
Production 36/38(cl) = **262.80 ± 1.71**
Scaling Ratio K/Ca = **0.430**
Abundance Ratio 40K/K = **1.1700 ± 0.0100 E-04**
Atomic Weight K = **39.0983 ± 0.0001 g**

A little bumpy but acceptable.

Results	40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD	39Ar(k) (%,n)	K/Ca ± 2σ
Age Plateau		14.97884 ± 0.01196	**42.46 ± 0.17**	1.22	69.66	0.101 ± 0.000
		± 0.08%	**± 0.39%**	29%	8	
		Full External Error ± 0.97		2.07	2σ Confidence Limit	
		Analytical Error ± 0.03		1.1039	Error Magnification	
Total Fusion Age		14.99817 ± 0.00940	**42.52 ± 0.16**		21	0.102 ± 0.000
		± 0.06%	**± 0.39%**			
		Full External Error ± 0.97				
		Analytical Error ± 0.03				
Normal Isochron	**88.47 ± 177.82**	14.99467 ± 0.01685	**42.51 ± 0.17**	1.14	69.66	
	######## ± 65.03%	± 0.11%	**± 0.40%**	34%	8	
		Full External Error ± 0.97		2.15	2σ Confidence Limit	
		Analytical Error ± 0.05		1.0674	Error Magnification	
Inverse Isochron	**156.06 ± 101.49**	14.98540 ± 0.01272	**42.48 ± 0.17**	0.94	69.66	
Clustered Points	**± 65.03%**	± 0.08%	**± 0.39%**	46%	8	
		Full External Error ± 0.97		2.15	2σ Confidence Limit	
		Analytical Error ± 0.04		1.0000	Error Magnification	
				0%	Spreading Factor	





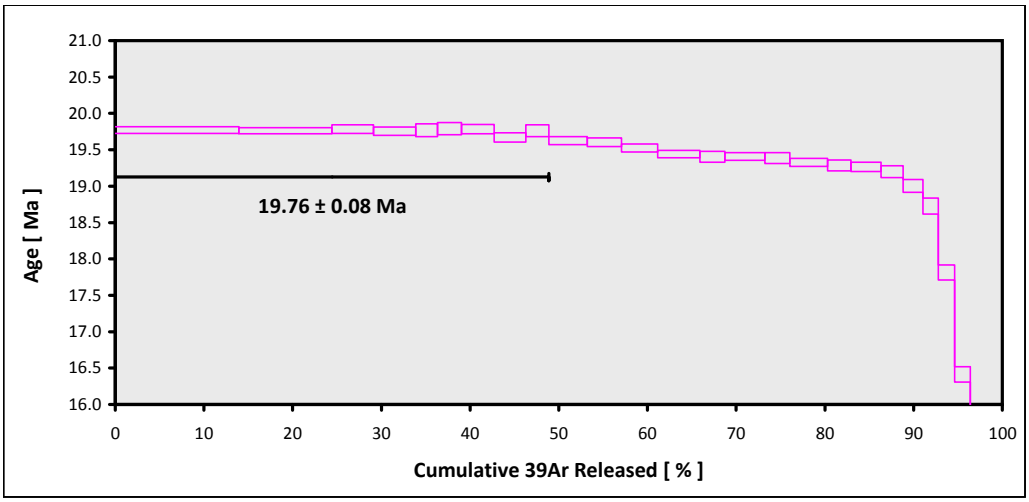
EXP#14D30221 > MV1203-D51-10 > Groundmass > MV1203 (13-INT-04)
WALVIS RIDGE > RSA GUYOT
14-OSU-04 (4B12-14) > Incremental Heating > Susan Schnur

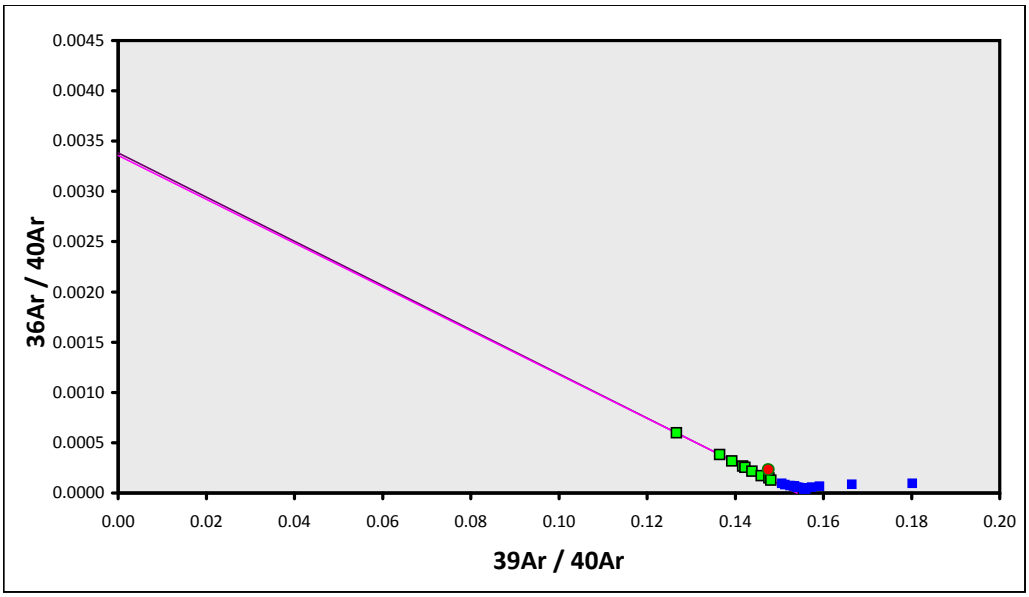
Information on Analysis and Constants Used in Calculations

Project = **MV1203 (13-INT-04)**
Sample = **MV1203-D51-10**
Material = **Groundmass**
Location = **RSA Guyot**
Region = **Walvis Ridge**
Analyst = **Susan Schnur**
Irradiation = **14-OSU-04 (4B12-14)**
Position = **X: 0 | Y: 0 | Z/H: 20.83 mm**
FCT-NM Age = **28.201 ± 0.023 Ma**
FCT-NM Reference = **Kuiper et al (2008)**
FCT-NM 40Ar/39Ar Ratio = **9.29596 ± 0.01915**
FCT-NM J-value = **0.00169078 ± 0.00000348**
Air Shot 40Ar/36Ar = **303.5560 ± 0.5221**
Air Shot MDF = **0.99335673 ± 0.00071358 (LIN)**
Experiment Type = **Incremental Heating**
Extraction Method = **Bulk Laser Heating**
Heating = **77 sec**
Isolation = **6.00 min**
Instrument = **ARGUS-VI-D**
Preferred Age = **Plateau Age**
Age Classification = **Eruption Age**
IGSN = **IESRS0031**
Rock Class = **Igneous>Volcanic>Mafic**
Lithology = **Trachybasalt**
Lat-Lon = **39°28.3'S - 5°59.5'W**
Age Equations = **Min et al. (2000)**
Negative Intensities = **Allowed**
Collector Calibrations = **40Ar 36Ar**
Decay 40K = **5.530 ± 0.048 E-10 1/a**
Decay 39Ar = **2.940 ± 0.016 E-07 1/h**
Decay 37Ar = **8.230 ± 0.012 E-04 1/h**
Decay 36Cl = **2.257 ± 0.015 E-06 1/a**
Decay 40K(EC,β^+) = **0.580 ± 0.009 E-10 1/a**
Decay 40K(β^-) = **4.950 ± 0.043 E-10 1/a**
Atmospheric 40/36(a) = **295.50**
Atmospheric 38/36(a) = **0.1869**
Production 39/37(ca) = **0.0006756 ± 0.0000089**
Production 38/37(ca) = **0.0000718 ± 0.0000092**
Production 36/37(ca) = **0.0002663 ± 0.0000004**
Production 40/39(k) = **0.003823 ± 0.000102**
Production 38/39(k) = **0.012031 ± 0.000019**
Production 36/38(cl) = **262.80 ± 1.71**
Scaling Ratio K/Ca = **0.430**
Abundance Ratio 40K/K = **1.1700 ± 0.0100 E-04**
Atomic Weight K = **39.0983 ± 0.0001 g**

Plateau not great, but plateau / isochron ages concordant.

Results	40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD	39Ar(k) (%,n)	K/Ca ± 2σ
Age Plateau		6.49838 ± 0.00729	**19.76 ± 0.08**	1.24	48.88	0.406 ± 0.133
		± 0.11%	**± 0.42%**	27%	9	
		Full External Error	± 0.45	2.00	2σ Confidence Limit	
		Analytical Error	± 0.02	1.1117	Error Magnification	
Total Fusion Age		6.31568 ± 0.00456	**19.21 ± 0.08**		30	0.302 ± 0.001
		± 0.07%	**± 0.42%**			
		Full External Error	± 0.44			
		Analytical Error	± 0.01			
Normal Isochron	**299.75 ± 6.24**	6.48677 ± 0.01698	**19.73 ± 0.10**	1.41	48.88	
	± 2.08%	± 0.26%	**± 0.49%**	20%	9	
		Full External Error	± 0.45	2.07	2σ Confidence Limit	
		Analytical Error	± 0.05	1.1871	Error Magnification	
Inverse Isochron	**297.89 ± 5.96**	6.49265 ± 0.01619	**19.74 ± 0.09**	1.29	48.88	
	± 2.00%	± 0.25%	**± 0.48%**	25%	9	
		Full External Error	± 0.45	2.07	2σ Confidence Limit	
		Analytical Error	± 0.05	1.1350	Error Magnification	
				14%	Spreading Factor	





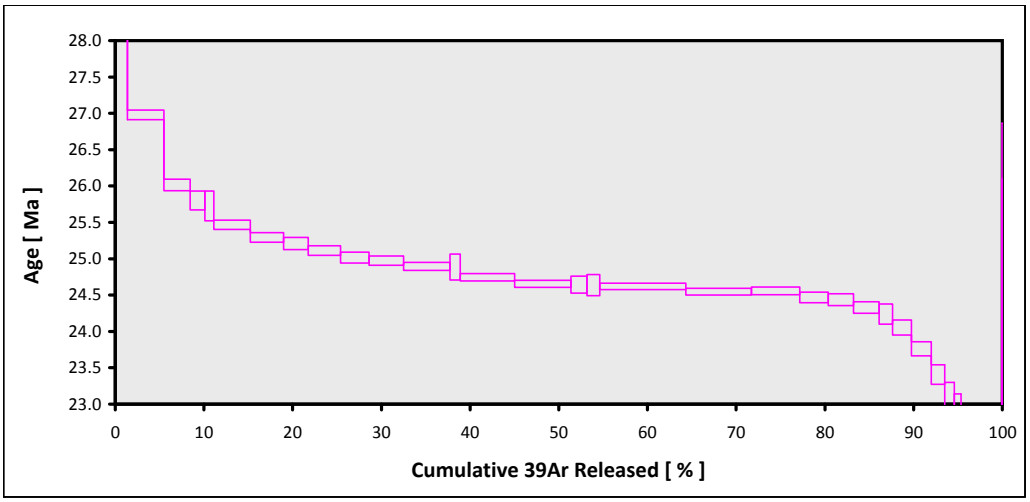
EXP#14D30263 > MV1203-D52-05 > Groundmass > MV1203 (13-INT-04)
WALVIS RIDGE > ACUSHNET GUYOT
14-OSU-04 (4B14-14) > Incremental Heating > Susan Schnur

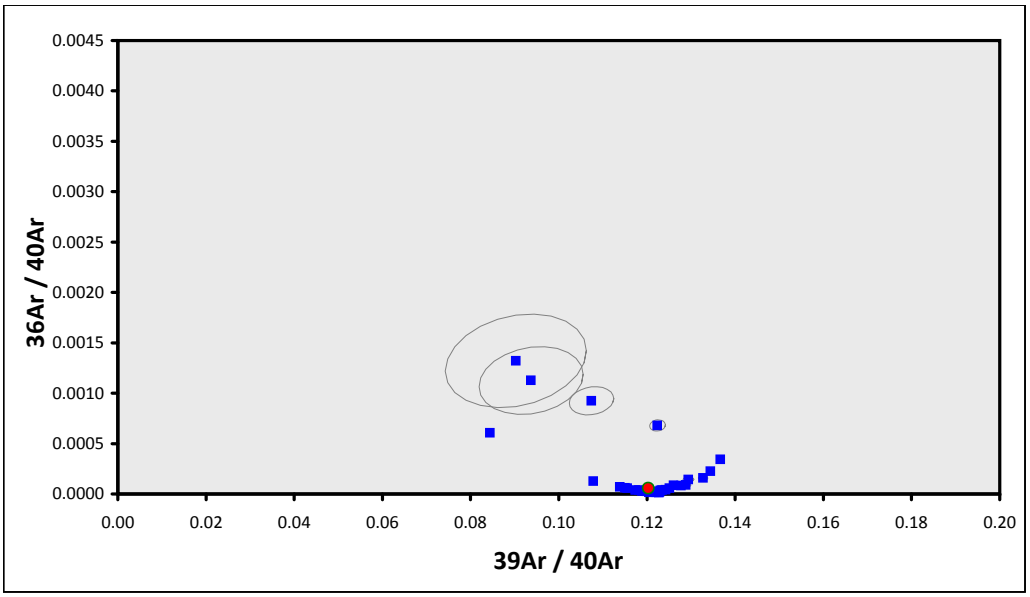
Information on Analysis and Constants Used in Calculations

Project = **MV1203 (13-INT-04)**
Sample = **MV1203-D52-05**
Material = **Groundmass**
Location = **Acushnet Guyot**
Region = **Walvis Ridge**
Analyst = **Susan Schnur**
Irradiation = **14-OSU-04 (4B14-14)**
Position = **X: 0 | Y: 0 | Z/H: 23.11 mm**
FCT-NM Age = **28.201 ± 0.023 Ma**
FCT-NM Reference = **Kuiper et al (2008)**
FCT-NM 40Ar/39Ar Ratio = **9.33439 ± 0.01914**
FCT-NM J-value = **0.00168382 ± 0.00000345**
Air Shot 40Ar/36Ar = **303.5750 ± 0.5161**
Air Shot MDF = **0.99334148 ± 0.00071069 (LIN)**
Experiment Type = **Incremental Heating**
Extraction Method = **Bulk Laser Heating**
Heating = **77 sec**
Isolation = **6.00 min**
Instrument = **ARGUS-VI-D**
Preferred Age = Undefined
Age Classification = Undefined
IGSN = **IESRS0032**
Rock Class = **Igneous>Volcanic>Mafic**
Lithology = **Trachybasalt**
Lat-Lon = **38°49.0'S - 5°44.0'W**
Age Equations = **Min et al. (2000)**
Negative Intensities = **Allowed**
Collector Calibrations = **40Ar 36Ar**
Decay 40K = **5.530 ± 0.048 E-10 1/a**
Decay 39Ar = **2.940 ± 0.016 E-07 1/h**
Decay 37Ar = **8.230 ± 0.012 E-04 1/h**
Decay 36Cl = **2.257 ± 0.015 E-06 1/a**
Decay 40K(EC,β^+) = **0.580 ± 0.009 E-10 1/a**
Decay 40K(β^-) = **4.950 ± 0.043 E-10 1/a**
Atmospheric 40/36(a) = **295.50**
Atmospheric 38/36(a) = **0.1869**
Production 39/37(ca) = **0.0006756 ± 0.0000089**
Production 38/37(ca) = **0.0000718 ± 0.0000092**
Production 36/37(ca) = **0.0002663 ± 0.0000004**
Production 40/39(k) = **0.003823 ± 0.000102**
Production 38/39(k) = **0.012031 ± 0.000019**
Production 36/38(cl) = **262.80 ± 1.71**
Scaling Ratio K/Ca = **0.430**
Abundance Ratio 40K/K = **1.1700 ± 0.0100 E-04**
Atomic Weight K = **39.0983 ± 0.0001 g**

Clear recoil pattern, not great.

Results	40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD	39Ar(k) (%,n)	K/Ca ± 2σ
Age Plateau						
Cannot Calculate						
Total Fusion Age		8.17413 ± 0.00491 ± 0.06%	**24.72 ± 0.10 ± 0.41%**		37	0.311 ± 0.001
			Full External Error ± 0.57			
			Analytical Error ± 0.01			
Normal Isochron						
Cannot Calculate						
Inverse Isochron						
Cannot Calculate						





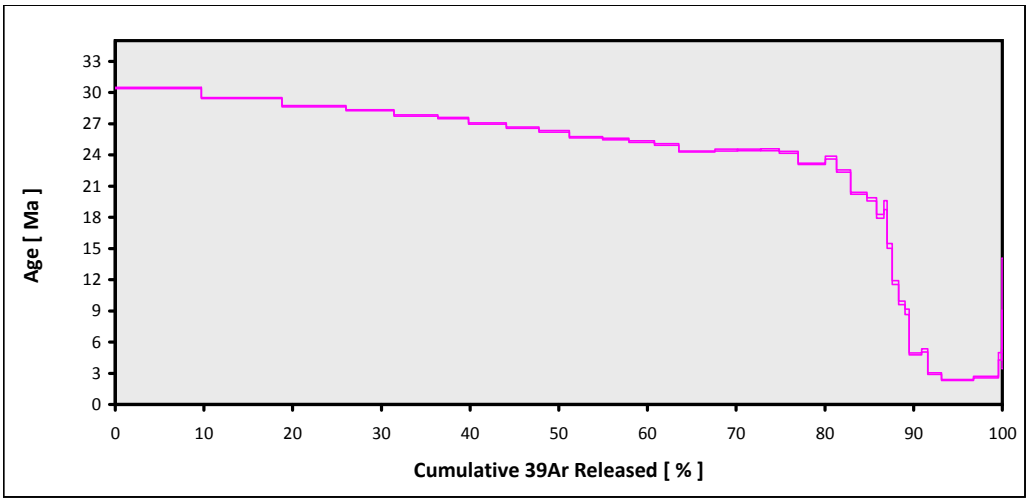
EXP#14D30364 > MV1203-D53-01 > Groundmass > MV1203 (13-INT-04)
WALVIS RIDGE > ACUSHNET GUYOT
14-OSU-04 (4B16-14) > Incremental Heating > Susan Schnur

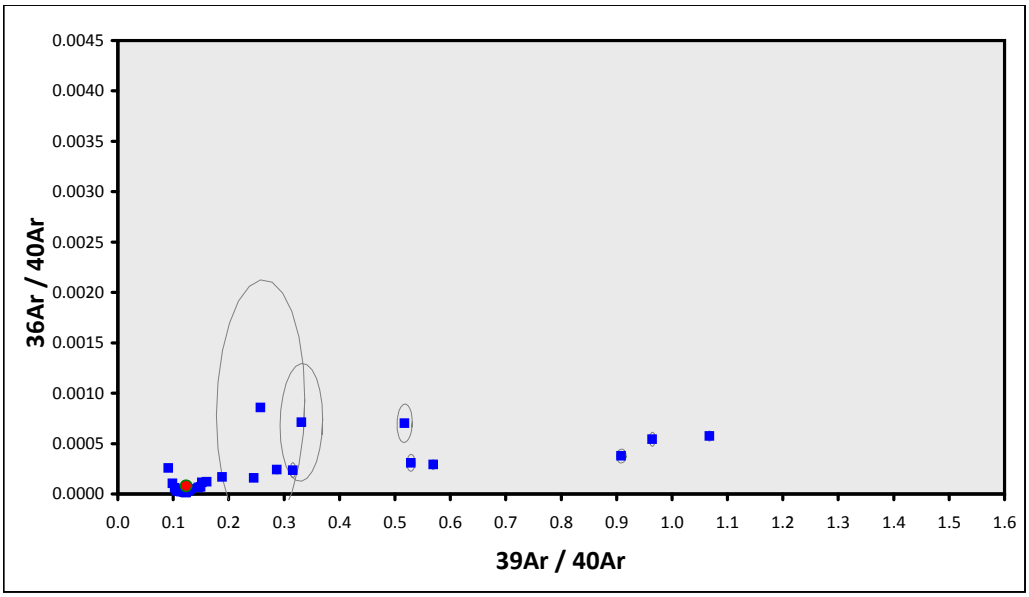
Information on Analysis and Constants Used in Calculations

Project = **MV1203 (13-INT-04)**
Sample = **MV1203-D53-01**
Material = **Groundmass**
Location = **Acushnet Guyot**
Region = **Walvis Ridge**
Analyst = **Susan Schnur**
Irradiation = **14-OSU-04 (4B16-14)**
Position = **X: 0 | Y: 0 | Z/H: 25.43 mm**
FCT-NM Age = **28.201 ± 0.023 Ma**
FCT-NM Reference = **Kuiper et al (2008)**
FCT-NM 40Ar/39Ar Ratio = **9.37646 ± 0.01913**
FCT-NM J-value = **0.00167626 ± 0.00000342**
Air Shot 40Ar/36Ar = **303.5690 ± 0.5130**
Air Shot MDF = **0.99334630 ± 0.00070928 (LIN)**
Experiment Type = **Incremental Heating**
Extraction Method = **Bulk Laser Heating**
Heating = **77 sec**
Isolation = **6.00 min**
Instrument = **ARGUS-VI-D**
Preferred Age = Undefined
Age Classification = Undefined
IGSN = **IESRS0033**
Rock Class = **Igneous>Volcanic>Mafic**
Lithology = **Trachybasalt**
Lat-Lon = **38°49.9'S - 5°43.8'W**
Age Equations = **Min et al. (2000)**
Negative Intensities = **Allowed**
Collector Calibrations = **40Ar 36Ar**
Decay 40K = **5.530 ± 0.048 E-10 1/a**
Decay 39Ar = **2.940 ± 0.016 E-07 1/h**
Decay 37Ar = **8.230 ± 0.012 E-04 1/h**
Decay 36Cl = **2.257 ± 0.015 E-06 1/a**
Decay 40K(EC,β^+) = **0.580 ± 0.009 E-10 1/a**
Decay 40K(β^-) = **4.950 ± 0.043 E-10 1/a**
Atmospheric 40/36(a) = **295.50**
Atmospheric 38/36(a) = **0.1869**
Production 39/37(ca) = **0.0006756 ± 0.0000089**
Production 38/37(ca) = **0.0000718 ± 0.0000092**
Production 36/37(ca) = **0.0002663 ± 0.0000004**
Production 40/39(k) = **0.003823 ± 0.000102**
Production 38/39(k) = **0.012031 ± 0.000019**
Production 36/38(cl) = **262.80 ± 1.71**
Scaling Ratio K/Ca = **0.430**
Abundance Ratio 40K/K = **1.1700 ± 0.0100 E-04**
Atomic Weight K = **39.0983 ± 0.0001 g**

Terrible, barely any plateau

Results	40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD	39Ar(k) (%,n)	K/Ca ± 2σ
Age Plateau Cannot Calculate						
Total Fusion Age		7.91021 ± 0.00455 ± 0.06%	**23.82 ± 0.10 ± 0.41%**		37	0.241 ± 0.001
			Full External Error ± 0.54			
			Analytical Error ± 0.01			
Normal Isochron Cannot Calculate						
Inverse Isochron Cannot Calculate						





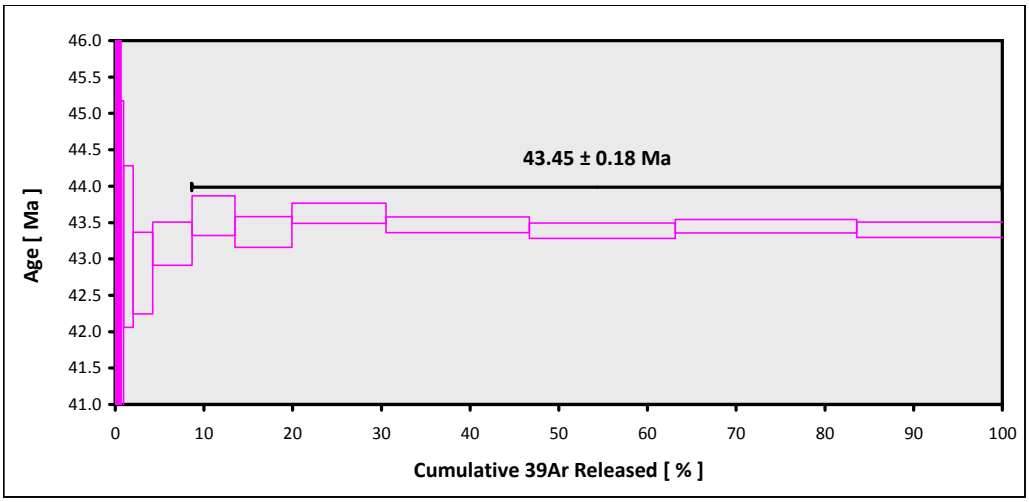
EXP#14D30415 > MV1203-D58-16 > Hornblende > MV1203 (13-INT-04)
WALVIS RIDGE > WANDERER SEAMOUNT
14-OSU-04 (4B24-14) > Incremental Heating > Susan Schnur

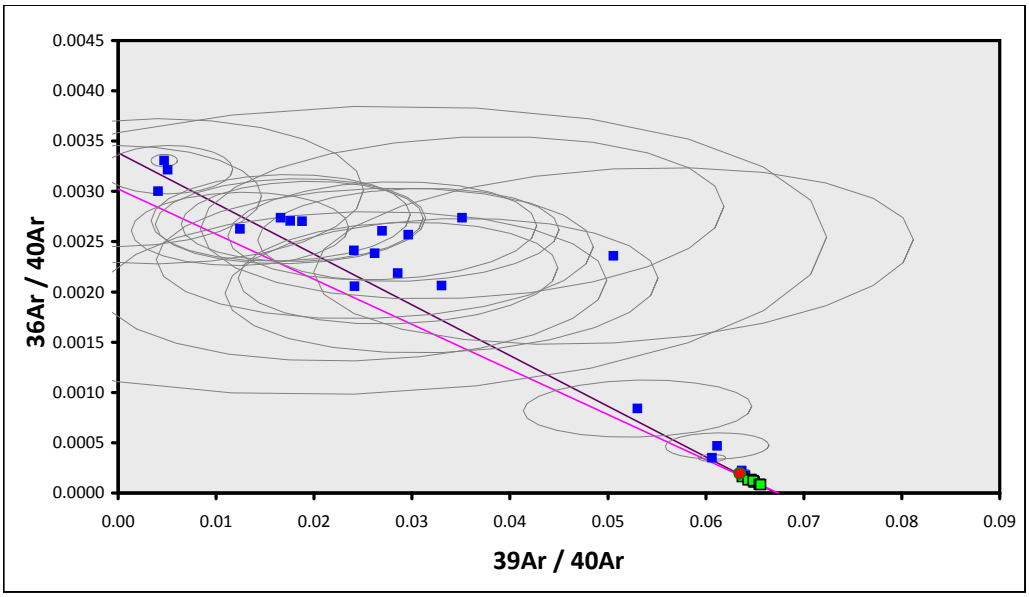
Information on Analysis and Constants Used in Calculations

Project = **MV1203 (13-INT-04)**
Sample = **MV1203-D58-16**
Material = **Hornblende**
Location = **Wanderer Seamount**
Region = **Walvis Ridge**
Analyst = **Susan Schnur**
Irradiation = **14-OSU-04 (4B24-14)**
Position = **X: 0 | Y: 0 | Z/H: 36.77 mm**
FCT-NM Age = **28.201 ± 0.023 Ma**
FCT-NM Reference = **Kuiper et al (2008)**
FCT-NM 40Ar/39Ar Ratio = **9.62519 ± 0.01915**
FCT-NM J-value = **0.00163294 ± 0.00000325**
Air Shot 40Ar/36Ar = **303.5690 ± 0.5130**
Air Shot MDF = **0.99334630 ± 0.00070928 (LIN)**
Experiment Type = **Incremental Heating**
Extraction Method = **Bulk Laser Heating**
Heating = **77 sec**
Isolation = **6.00 min**
Instrument = **ARGUS-VI-D**
Preferred Age = **Plateau Age**
Age Classification = **Eruption Age**
IGSN = **IESRS0034**
Rock Class = **Igneous>Volcanic>Mafic**
Lithology = **Trachyandesite**
Lat-Lon = **35°46.1'S - 0°58.0'W**
Age Equations = **Min et al. (2000)**
Negative Intensities = **Allowed**
Collector Calibrations = **40Ar 36Ar**
Decay 40K = **5.530 ± 0.048 E-10 1/a**
Decay 39Ar = **2.940 ± 0.016 E-07 1/h**
Decay 37Ar = **8.230 ± 0.012 E-04 1/h**
Decay 36Cl = **2.257 ± 0.015 E-06 1/a**
Decay 40K(EC,β^+) = **0.580 ± 0.009 E-10 1/a**
Decay 40K(β^-) = **4.950 ± 0.043 E-10 1/a**
Atmospheric 40/36(a) = **295.50**
Atmospheric 38/36(a) = **0.1869**
Production 39/37(ca) = **0.0006756 ± 0.0000089**
Production 38/37(ca) = **0.0000718 ± 0.0000092**
Production 36/37(ca) = **0.0002663 ± 0.0000004**
Production 40/39(k) = **0.003823 ± 0.000102**
Production 38/39(k) = **0.012031 ± 0.000019**
Production 36/38(cl) = **262.80 ± 1.71**
Scaling Ratio K/Ca = **0.430**
Abundance Ratio 40K/K = **1.1700 ± 0.0100 E-04**
Atomic Weight K = **39.0983 ± 0.0001 g**

Only 7 steps in plateau (degasses at high T), but age is good.

Results	40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD	39Ar(k) (%,n)	K/Ca ± 2σ
Age Plateau		14.89314 ± 0.02101	**43.45 ± 0.18**	1.75	91.35	0.144 ± 0.000
		± 0.14%	**± 0.42%**	11%	7	
		Full External Error ± 0.99		2.15	2σ Confidence Limit	
		Analytical Error ± 0.06		1.3227	Error Magnification	
Total Fusion Age		14.85652 ± 0.02503	**43.35 ± 0.19**		29	0.145 ± 0.001
		± 0.17%	**± 0.43%**			
		Full External Error ± 0.99				
		Analytical Error ± 0.07				
Normal Isochron	**329.35 ± 61.58**	14.83788 ± 0.10166	**43.29 ± 0.34**	1.65	91.35	
	± 18.70%	± 0.69%	**± 0.78%**	14%	7	
		Full External Error ± 1.03		2.26	2σ Confidence Limit	
		Analytical Error ± 0.29		1.2858	Error Magnification	
Inverse Isochron	**330.65 ± 60.86**	14.83640 ± 0.10170	**43.29 ± 0.34**	1.66	91.35	
Clustered Points	**± 18.41%**	± 0.69%	**± 0.78%**	14%	7	
		Full External Error ± 1.03		2.26	2σ Confidence Limit	
		Analytical Error ± 0.29		1.2884	Error Magnification	
				3%	Spreading Factor	





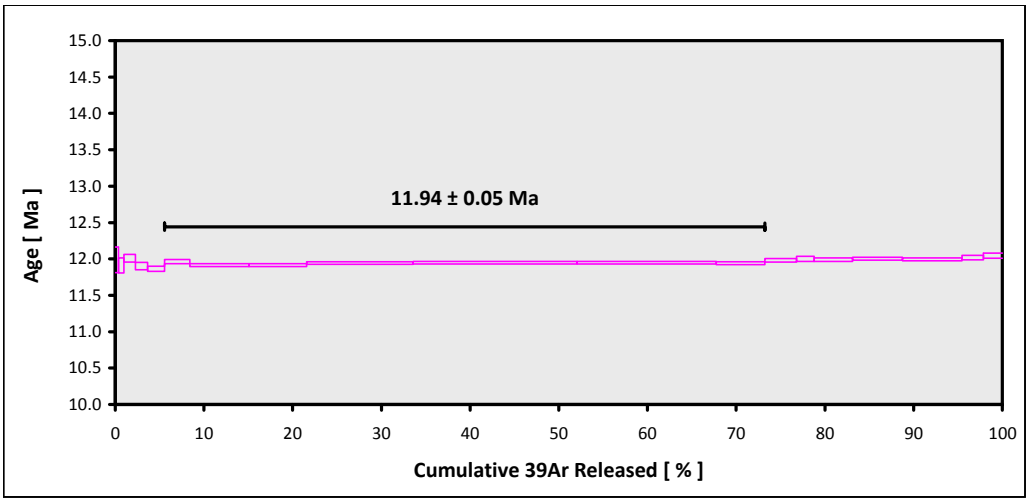
EXP#14D30505 > MV1203-D48-04 > Alkali-Feldspar > MV1203 (13-INT-04)
WALVIS RIDGE > JAHONT GUYOT
14-OSU-04 (4B9-14) > Incremental Heating > Susan Schnur

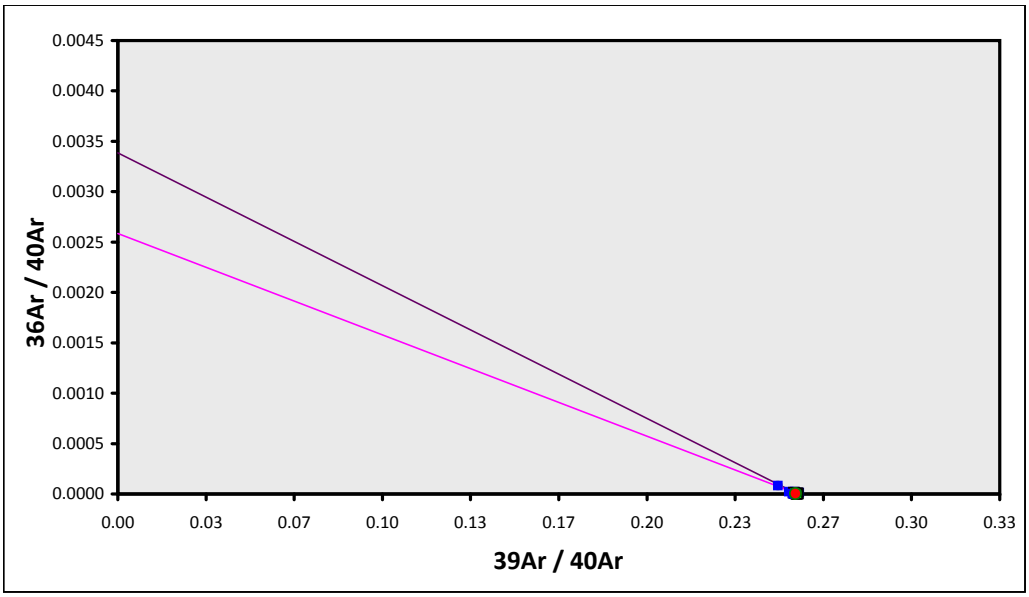
Information on Analysis and Constants Used in Calculations

Project = **MV1203 (13-INT-04)**
Sample = **MV1203-D48-04**
Material = **Alkali-Feldspar**
Location = **Jahont Guyot**
Region = **Walvis Ridge**
Analyst = **Susan Schnur**
Irradiation = **14-OSU-04 (4B9-14)**
Position = **X: 0 | Y: 0 | Z/H: 17.01 mm**
FCT-NM Age = **28.201 ± 0.023 Ma**
FCT-NM Reference = **Kuiper et al (2008)**
FCT-NM 40Ar/39Ar Ratio = **9.23805 ± 0.01912**
FCT-NM J-value = **0.00170138 ± 0.00000352**
Air Shot 40Ar/36Ar = **303.5700 ± 0.5191**
Air Shot MDF = **0.99334550 ± 0.00071212 (LIN)**
Experiment Type = **Incremental Heating**
Extraction Method = **Bulk Laser Heating**
Heating = **60 sec**
Isolation = **6.00 min**
Instrument = **ARGUS-VI-D**
Preferred Age = **Plateau Age**
Age Classification = **Eruption Age**
IGSN = **IESRS0035**
Rock Class = **Igneous>Volcanic>Mafic**
Lithology = **Trachyte**
Lat-Lon = **39°33.1'S - 7°50.0'W**
Age Equations = **Min et al. (2000)**
Negative Intensities = **Allowed**
Collector Calibrations = **40Ar 36Ar**
Decay 40K = **5.530 ± 0.048 E-10 1/a**
Decay 39Ar = **2.940 ± 0.016 E-07 1/h**
Decay 37Ar = **8.230 ± 0.012 E-04 1/h**
Decay 36Cl = **2.257 ± 0.015 E-06 1/a**
Decay 40K(EC,β^+) = **0.580 ± 0.009 E-10 1/a**
Decay 40K(β^-) = **4.950 ± 0.043 E-10 1/a**
Atmospheric 40/36(a) = **295.50**
Atmospheric 38/36(a) = **0.1869**
Production 39/37(ca) = **0.0006756 ± 0.0000089**
Production 38/37(ca) = **0.0000718 ± 0.0000092**
Production 36/37(ca) = **0.0002663 ± 0.0000004**
Production 40/39(k) = **0.003823 ± 0.000102**
Production 38/39(k) = **0.012031 ± 0.000019**
Production 36/38(cl) = **262.80 ± 1.71**
Scaling Ratio K/Ca = **0.430**
Abundance Ratio 40K/K = **1.1700 ± 0.0100 E-04**
Atomic Weight K = **39.0983 ± 0.0001 g**

Low and high T steps a bit odd, but overall acceptable.

Results	40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD	39Ar(k) (%,n)	K/Ca ± 2σ
Age Plateau		3.89339 ± 0.00391	**11.94 ± 0.05**	2.55	67.65	5.16 ± 0.12
Error Mean		± 0.10%	**± 0.42%**	2%	7	
		Full External Error ± 0.27		2.15	2σ Confidence Limit	
		Analytical Error ± 0.01		1.5977	Error Magnification	
Total Fusion Age		3.89904 ± 0.00200	**11.96 ± 0.05**		19	5.12 ± 0.06
		± 0.05%	**± 0.42%**			
		Full External Error ± 0.27				
		Analytical Error ± 0.01				
Normal Isochron	**274.23 ± 231.07**	3.89425 ± 0.00613	**11.94 ± 0.05**	2.97	67.65	
Error Chron	**± 84.26%**	± 0.16%	**± 0.44%**	1%	7	
		Full External Error ± 0.27		2.26	2σ Confidence Limit	
		Analytical Error ± 0.02		1.7227	Error Magnification	
Inverse Isochron	**386.85 ± 207.21**	3.89168 ± 0.00601	**11.93 ± 0.05**	2.67	67.65	
Error Chron	**± 53.56%**	± 0.15%	**± 0.44%**	2%	7	
		Full External Error ± 0.27		2.26	2σ Confidence Limit	
		Analytical Error ± 0.02		1.6355	Error Magnification	
				1%	Spreading Factor	





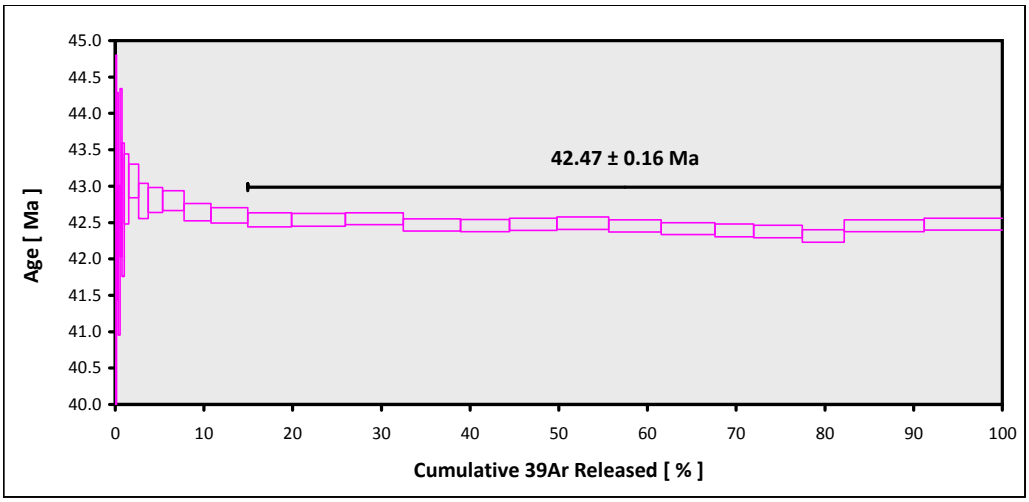
EXP#14D30532 > MV1203-D61-07C > Biotite > MV1203 (13-INT-04)
WALVIS RIDGE > MAYBE SEAMOUNT
14-OSU-04 (4B37-14) > Incremental Heating > Susan Schnur

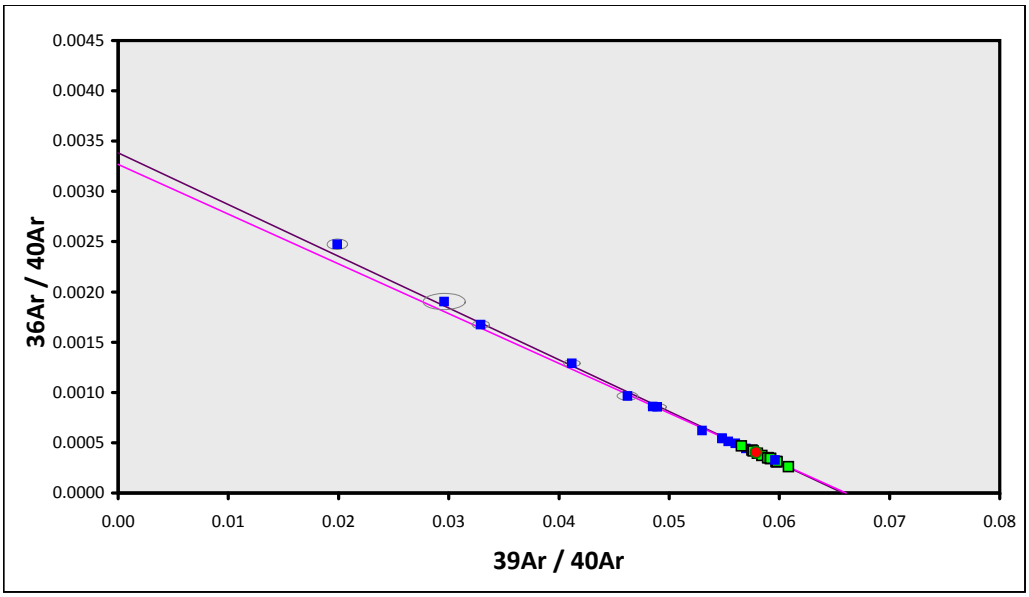
Information on Analysis and Constants Used in Calculations

Project = **MV1203 (13-INT-04)**
Sample = **MV1203-D61-07C**
Material = **Biotite**
Location = **Maybe Seamount**
Region = **Walvis Ridge**
Analyst = **Susan Schnur**
Irradiation = **14-OSU-04 (4B37-14)**
Position = **X: 0 | Y: 0 | Z/H: 51.5 mm**
FCT-NM Age = **28.201 ± 0.023 Ma**
FCT-NM Reference = **Kuiper et al (2008)**
FCT-NM 40Ar/39Ar Ratio = **10.05509 ± 0.01910**
FCT-NM J-value = **0.00156313 ± 0.00000297**
Air Shot 40Ar/36Ar = **303.5750 ± 0.5161**
Air Shot MDF = **0.99334148 ± 0.00071069 (LIN)**
Experiment Type = **Incremental Heating**
Extraction Method = **Bulk Laser Heating**
Heating = **60 sec**
Isolation = **6.00 min**
Instrument = **ARGUS-VI-D**
Preferred Age = **Plateau Age**
Age Classification = **Eruption Age**
IGSN = **IESRS0036**
Rock Class = **Igneous>Volcanic>Mafic**
Lithology = **Trachyte**
Lat-Lon = **37°12.1'S - 1°08.5'W**
Age Equations = **Min et al. (2000)**
Negative Intensities = **Allowed**
Collector Calibrations = **40Ar 36Ar**
Decay 40K = **5.530 ± 0.048 E-10 1/a**
Decay 39Ar = **2.940 ± 0.016 E-07 1/h**
Decay 37Ar = **8.230 ± 0.012 E-04 1/h**
Decay 36Cl = **2.257 ± 0.015 E-06 1/a**
Decay 40K(EC,β^+) = **0.580 ± 0.009 E-10 1/a**
Decay 40K(β^-) = **4.950 ± 0.043 E-10 1/a**
Atmospheric 40/36(a) = **295.50**
Atmospheric 38/36(a) = **0.1869**
Production 39/37(ca) = **0.0006756 ± 0.0000089**
Production 38/37(ca) = **0.0000718 ± 0.0000092**
Production 36/37(ca) = **0.0002663 ± 0.0000004**
Production 40/39(k) = **0.003823 ± 0.000102**
Production 38/39(k) = **0.012031 ± 0.000019**
Production 36/38(cl) = **262.80 ± 1.71**
Scaling Ratio K/Ca = **0.430**
Abundance Ratio 40K/K = **1.1700 ± 0.0100 E-04**
Atomic Weight K = **39.0983 ± 0.0001 g**

Small dip at high T but plateau is fine.

Results	40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD	39Ar(k) (%,n)	K/Ca ± 2σ
Age Plateau		15.20219 ± 0.01055	**42.47 ± 0.16**	1.54	80.33	49 ± 24
		± 0.07%	**± 0.38%**	10%	13	
		Full External Error ± 0.97		1.82	2σ Confidence Limit	
		Analytical Error ± 0.03		1.2425	Error Magnification	
Total Fusion Age		15.21241 ± 0.00797	**42.50 ± 0.16**		27	125 ± 59
		± 0.05%	**± 0.38%**			
		Full External Error ± 0.97				
		Analytical Error ± 0.02				
Normal Isochron	**306.70 ± 8.86**	15.13387 ± 0.05474	**42.28 ± 0.22**	1.11	80.33	
	± 2.89%	± 0.36%	**± 0.52%**	35%	13	
		Full External Error ± 0.97		1.85	2σ Confidence Limit	
		Analytical Error ± 0.15		1.0525	Error Magnification	
Inverse Isochron	**306.04 ± 8.85**	15.13799 ± 0.05466	**42.29 ± 0.22**	1.10	80.33	
	± 2.89%	± 0.36%	**± 0.52%**	35%	13	
		Full External Error ± 0.97		1.85	2σ Confidence Limit	
		Analytical Error ± 0.15		1.0510	Error Magnification	
				6%	Spreading Factor	





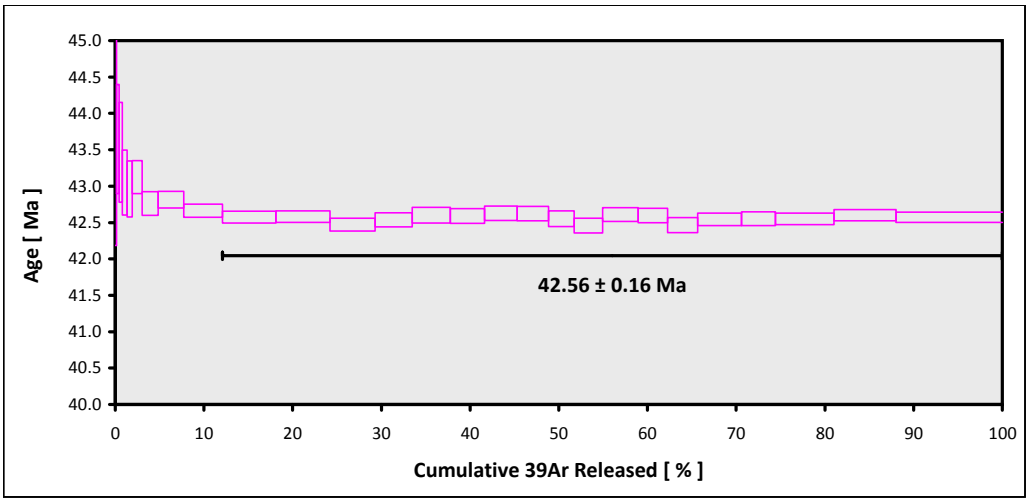
EXP#14D30570 > MV1203-D62-03 > Biotite > MV1203 (13-INT-04)
WALVIS RIDGE > MAYBE SEAMOUNT
14-OSU-04 (4B41-14) > Incremental Heating > Susan Schnur

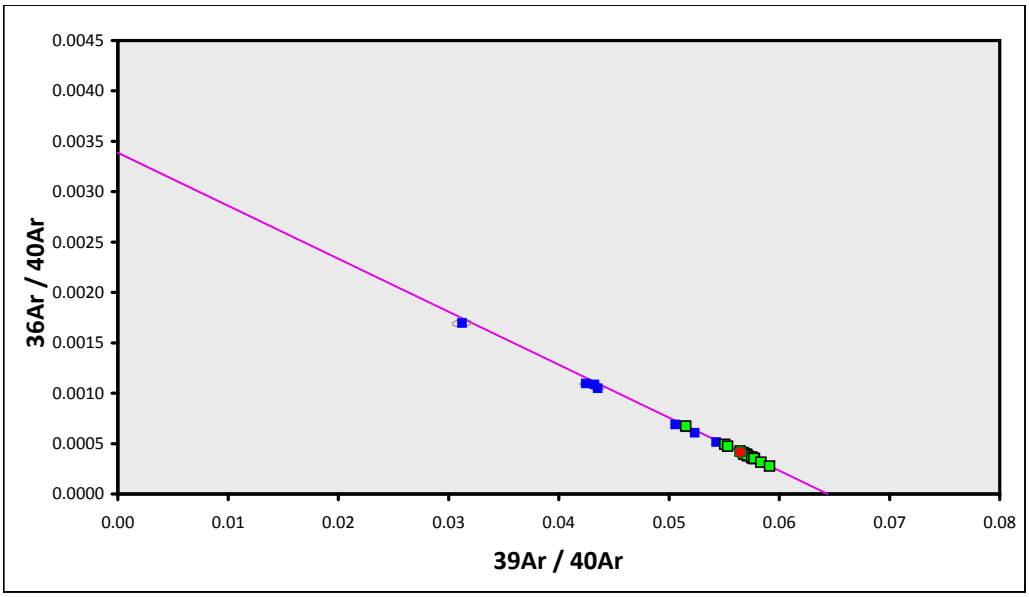
Information on Analysis and Constants Used in Calculations

Project = **MV1203 (13-INT-04)**
Sample = **MV1203-D62-03**
Material = **Biotite**
Location = **Maybe Seamount**
Region = **Walvis Ridge**
Analyst = **Susan Schnur**
Irradiation = **14-OSU-04 (4B41-14)**
Position = **X: 0 | Y: 0 | Z/H: 57.03 mm**
FCT-NM Age = **28.201 ± 0.023 Ma**
FCT-NM Reference = **Kuiper et al (2008)**
FCT-NM 40Ar/39Ar Ratio = **10.24765 ± 0.01916**
FCT-NM J-value = **0.00153376 ± 0.00000287**
Air Shot 40Ar/36Ar = **303.5780 ± 0.5161**
Air Shot MDF = **0.99333908 ± 0.00071068 (LIN)**
Experiment Type = **Incremental Heating**
Extraction Method = **Bulk Laser Heating**
Heating = **60 sec**
Isolation = **6.00 min**
Instrument = **ARGUS-VI-D**
Preferred Age = **Plateau Age**
Age Classification = **Eruption Age**
IGSN = **IESRS0037**
Rock Class = **Igneous>Volcanic>Mafic**
Lithology = **Trachyandesite**
Lat-Lon = **37°14.8'S - 1°09.6'W**
Age Equations = **Min et al. (2000)**
Negative Intensities = **Allowed**
Collector Calibrations = **40Ar 36Ar**
Decay 40K = **5.530 ± 0.048 E-10 1/a**
Decay 39Ar = **2.940 ± 0.016 E-07 1/h**
Decay 37Ar = **8.230 ± 0.012 E-04 1/h**
Decay 36Cl = **2.257 ± 0.015 E-06 1/a**
Decay 40K(EC,β^+) = **0.580 ± 0.009 E-10 1/a**
Decay 40K(β^-) = **4.950 ± 0.043 E-10 1/a**
Atmospheric 40/36(a) = **295.50**
Atmospheric 38/36(a) = **0.1869**
Production 39/37(ca) = **0.0006756 ± 0.0000089**
Production 38/37(ca) = **0.0000718 ± 0.0000092**
Production 36/37(ca) = **0.0002663 ± 0.0000004**
Production 40/39(k) = **0.003823 ± 0.000102**
Production 38/39(k) = **0.012031 ± 0.000019**
Production 36/38(cl) = **262.80 ± 1.71**
Scaling Ratio K/Ca = **0.430**
Abundance Ratio 40K/K = **1.1700 ± 0.0100 E-04**
Atomic Weight K = **39.0983 ± 0.0001 g**

Good plateau

Results	40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD	39Ar(k) (%,n)	K/Ca ± 2σ
Age Plateau		15.52821 ± 0.00848 ± 0.05%	**42.56 ± 0.16 ± 0.37%**	1.17 28% 1.69 1.0795	87.92 18 2σ Confidence Limit Error Magnification	48 ± 15
		Full External Error ± 0.97 Analytical Error ± 0.02				
Total Fusion Age		15.54139 ± 0.00764 ± 0.05%	**42.60 ± 0.16 ± 0.37%**		27	83 ± 34
		Full External Error ± 0.97 Analytical Error ± 0.02				
Normal Isochron	**294.82 ± 5.45 ± 1.85%**	15.53274 ± 0.03796 ± 0.24%	**42.58 ± 0.19 ± 0.44%**	1.24 23% 1.71 1.1147	87.92 18 2σ Confidence Limit Error Magnification	
		Full External Error ± 0.97 Analytical Error ± 0.10				
Inverse Isochron	**295.19 ± 5.42 ± 1.84%**	15.53033 ± 0.03781 ± 0.24%	**42.57 ± 0.19 ± 0.44%**	1.24 23% 1.71 1.1115 12%	87.92 18 2σ Confidence Limit Error Magnification Spreading Factor	
		Full External Error ± 0.97 Analytical Error ± 0.10				





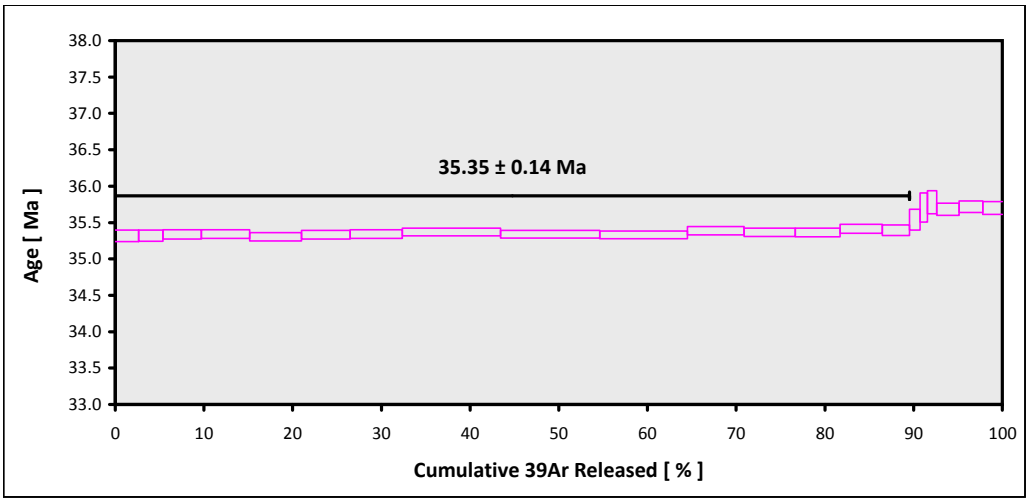
EXP#14D30658 > MV1203-D56-22 > Alkali-Feldspar > MV1203 (13-INT-04)
WALVIS RIDGE > HARPOONER GUYOT
14-OSU-04 (4B20-14) > Incremental Heating > Susan Schnur

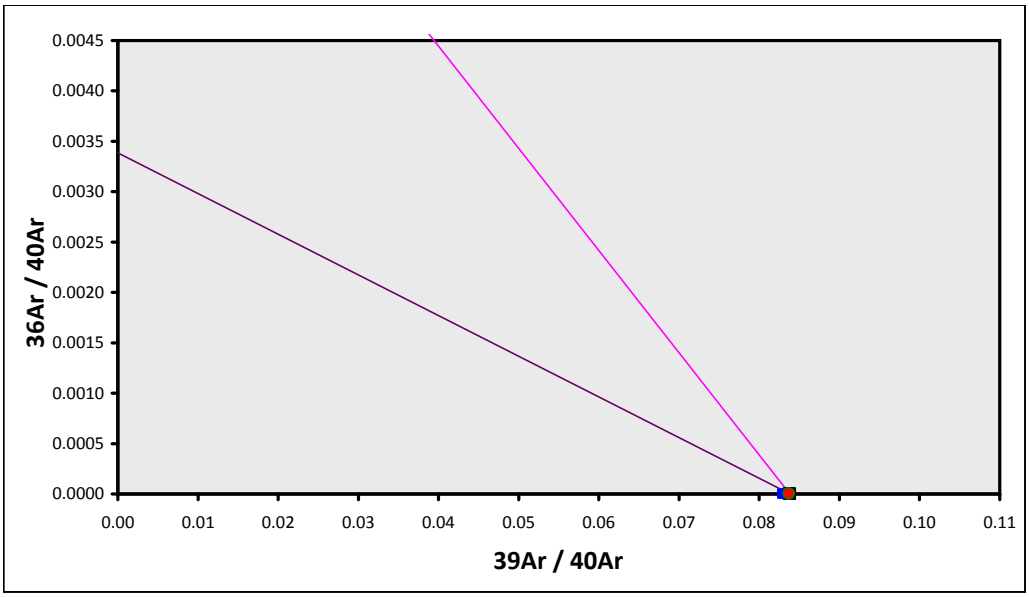
Information on Analysis and Constants Used in Calculations

Project = **MV1203 (13-INT-04)**
Sample = **MV1203-D56-22**
Material = **Alkali-Feldspar**
Location = **Harpooner Guyot**
Region = **Walvis Ridge**
Analyst = **Susan Schnur**
Irradiation = **14-OSU-04 (4B20-14)**
Position = **X: 0 | Y: 0 | Z/H: 31.22 mm**
FCT-NM Age = **28.201 ± 0.023 Ma**
FCT-NM Reference = **Kuiper et al (2008)**
FCT-NM 40Ar/39Ar Ratio = **9.49451 ± 0.01918**
FCT-NM J-value = **0.00165542 ± 0.00000334**
Air Shot 40Ar/36Ar = **303.5770 ± 0.5191**
Air Shot MDF = **0.99333988 ± 0.00071210 (LIN)**
Experiment Type = **Incremental Heating**
Extraction Method = **Bulk Laser Heating**
Heating = **60 sec**
Isolation = **6.00 min**
Instrument = **ARGUS-VI-D**
Preferred Age = **Plateau Age**
Age Classification = **Eruption Age**
IGSN = **IESRS0038**
Rock Class = **Igneous>Volcanic>Mafic**
Lithology = **Trachyte**
Lat-Lon = **37°18.2'S - 3°49.3'W**
Age Equations = **Min et al. (2000)**
Negative Intensities = **Allowed**
Collector Calibrations = **40Ar 36Ar**
Decay 40K = **5.530 ± 0.048 E-10 1/a**
Decay 39Ar = **2.940 ± 0.016 E-07 1/h**
Decay 37Ar = **8.230 ± 0.012 E-04 1/h**
Decay 36Cl = **2.257 ± 0.015 E-06 1/a**
Decay 40K(EC,β^+) = **0.580 ± 0.009 E-10 1/a**
Decay 40K(β^-) = **4.950 ± 0.043 E-10 1/a**
Atmospheric 40/36(a) = **295.50**
Atmospheric 38/36(a) = **0.1869**
Production 39/37(ca) = **0.0006756 ± 0.0000089**
Production 38/37(ca) = **0.0000718 ± 0.0000092**
Production 36/37(ca) = **0.0002663 ± 0.0000004**
Production 40/39(k) = **0.003823 ± 0.000102**
Production 38/39(k) = **0.012031 ± 0.000019**
Production 36/38(cl) = **262.80 ± 1.71**
Scaling Ratio K/Ca = **0.430**
Abundance Ratio 40K/K = **1.1700 ± 0.0100 E-04**
Atomic Weight K = **39.0983 ± 0.0001 g**

Good plateau

Results	40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD	39Ar(k) (%,n)	K/Ca ± 2σ
Age Plateau		11.92537 ± 0.00529 ± 0.04%	**35.35 ± 0.14 ± 0.40%**	0.98	89.54	9.3 ± 0.2
			Full External Error ± 0.81	47%	15	
			Analytical Error ± 0.02	1.76	2σ Confidence Limit	
				1.0000	Error Magnification	
Total Fusion Age		11.93738 ± 0.00511 ± 0.04%	**35.39 ± 0.14 ± 0.40%**		21	9.5 ± 0.2
			Full External Error ± 0.81			
			Analytical Error ± 0.02			
Normal Isochron	**98.87 ± 272.82 ########**	11.93170 ± 0.01113 ± 0.09%	**35.37 ± 0.15 ± 0.41%**	0.79	89.54	
			Full External Error ± 0.81	67%	15	
			Analytical Error ± 0.03	1.78	2σ Confidence Limit	
				1.0000	Error Magnification	
Inverse Isochron	**117.63 ± 65.45 ± 55.64%**	11.93170 ± 0.01087 ± 0.09%	**35.37 ± 0.15 ± 0.41%**	0.95	89.54	
Clustered Points			Full External Error ± 0.81	49%	15	
			Analytical Error ± 0.03	1.78	2σ Confidence Limit	
				1.0000	Error Magnification	
				0%	Spreading Factor	





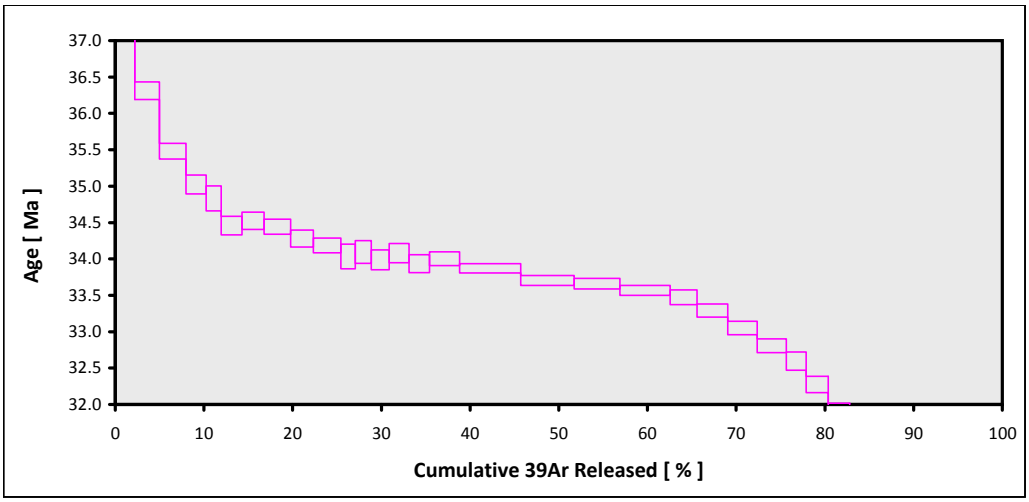
EXP#14D30688 > MV1203-D57-01A > Groundmass > MV1203 (13-INT-04)
WALVIS RIDGE > BAFFIN GUYOT
14-OSU-04 (4B21-14) > Incremental Heating > Susan Schnur

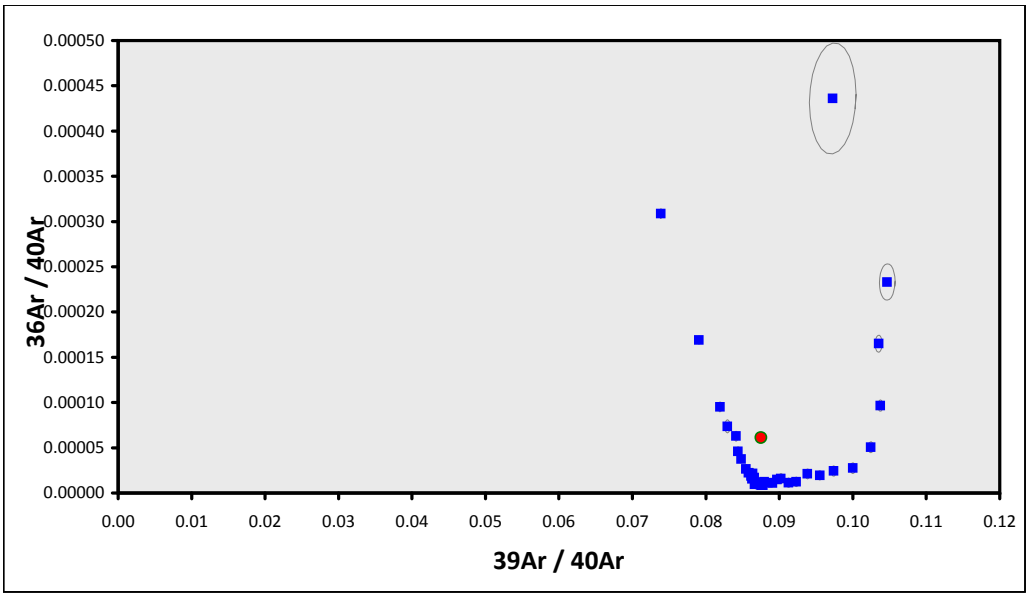
Information on Analysis and Constants Used in Calculations

Project = **MV1203 (13-INT-04)**
Sample = **MV1203-D57-01A**
Material = **Groundmass**
Location = **Baffin Guyot**
Region = **Walvis Ridge**
Analyst = **Susan Schnur**
Irradiation = **14-OSU-04 (4B21-14)**
Position = **X: 0 | Y: 0 | Z/H: 32.9 mm**
FCT-NM Age = **28.201 ± 0.023 Ma**
FCT-NM Reference = **Kuiper et al (2008)**
FCT-NM 40Ar/39Ar Ratio = **9.53226 ± 0.01916**
FCT-NM J-value = **0.00164886 ± 0.00000331**
Air Shot 40Ar/36Ar = **303.5780 ± 0.5191**
Air Shot MDF = **0.99333908 ± 0.00071210 (LIN)**
Experiment Type = **Incremental Heating**
Extraction Method = **Bulk Laser Heating**
Heating = **77 sec**
Isolation = **6.00 min**
Instrument = **ARGUS-VI-D**
Preferred Age = **Total Fusion**
Age Classification = **Eruption Age**
IGSN = **IESRS0039**
Rock Class = **Igneous>Volcanic>Mafic**
Lithology = **Tephrite**
Lat-Lon = **37°23.2'S - 4°14.0'W**
Age Equations = **Min et al. (2000)**
Negative Intensities = **Allowed**
Collector Calibrations = **40Ar 36Ar**
Decay 40K = **5.530 ± 0.048 E-10 1/a**
Decay 39Ar = **2.940 ± 0.016 E-07 1/h**
Decay 37Ar = **8.230 ± 0.012 E-04 1/h**
Decay 36Cl = **2.257 ± 0.015 E-06 1/a**
Decay 40K(EC,β^+) = **0.580 ± 0.009 E-10 1/a**
Decay 40K(β^-) = **4.950 ± 0.043 E-10 1/a**
Atmospheric 40/36(a) = **295.50**
Atmospheric 38/36(a) = **0.1869**
Production 39/37(ca) = **0.0006756 ± 0.0000089**
Production 38/37(ca) = **0.0000718 ± 0.0000092**
Production 36/37(ca) = **0.0002663 ± 0.0000004**
Production 40/39(k) = **0.003823 ± 0.000102**
Production 38/39(k) = **0.012031 ± 0.000019**
Production 36/38(cl) = **262.80 ± 1.71**
Scaling Ratio K/Ca = **0.430**
Abundance Ratio 40K/K = **1.1700 ± 0.0100 E-04**
Atomic Weight K = **39.0983 ± 0.0001 g**

Clear recoil pattern, not great. Total Fusion may approximate age due to clear recoil redistribution.

Results	40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD	39Ar(k) (%,n)	K/Ca ± 2σ
Age Plateau						
Cannot Calculate						
Total Fusion Age		11.22202 ± 0.00632 ± 0.06%	**33.15 ± 0.13 ± 0.40%**		37	0.554 ± 0.002
			Full External Error ± 0.76			
			Analytical Error ± 0.02			
Normal Isochron						
Cannot Calculate						
Inverse Isochron						
Cannot Calculate						





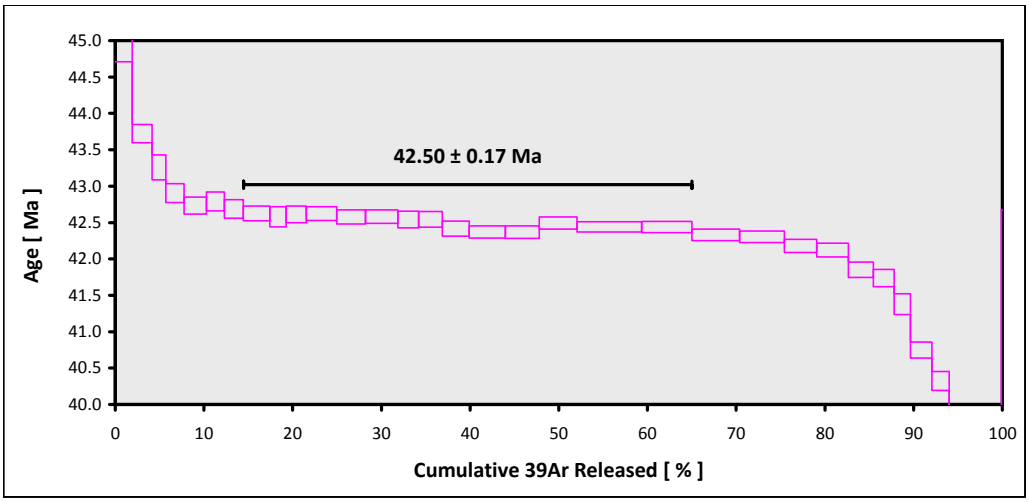
EXP#14D30789 > MV1203-D59-12 > Groundmass > MV1203 (13-INT-04)
WALVIS RIDGE > CONCORDIA SEAMOUNT
14-OSU-04 (4B25-14) > Incremental Heating > Susan Schnur

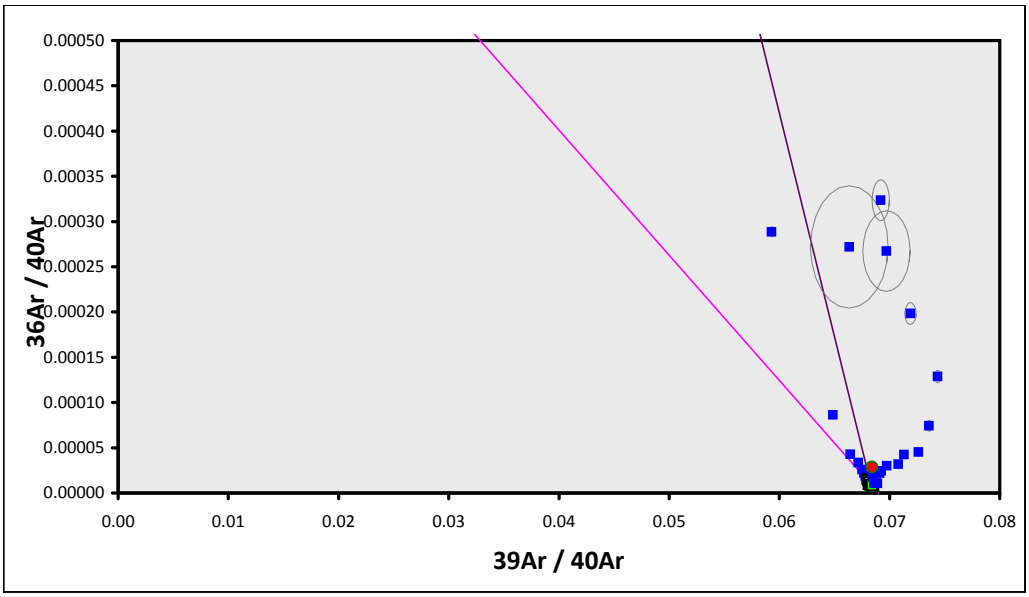
Information on Analysis and Constants Used in Calculations

Project = **MV1203 (13-INT-04)**
Sample = **MV1203-D59-12**
Material = **Groundmass**
Location = **Concordia Seamount**
Region = **Walvis Ridge**
Analyst = **Susan Schnur**
Irradiation = **14-OSU-04 (4B25-14)**
Position = **X: 0 | Y: 0 | Z/H: 37.72 mm**
FCT-NM Age = **28.201 ± 0.023 Ma**
FCT-NM Reference = **Kuiper et al (2008)**
FCT-NM 40Ar/39Ar Ratio = **9.64927 ± 0.01911**
FCT-NM J-value = **0.00162887 ± 0.00000323**
Air Shot 40Ar/36Ar = **303.5810 ± 0.5161**
Air Shot MDF = **0.99333667 ± 0.00071067 (LIN)**
Experiment Type = **Incremental Heating**
Extraction Method = **Bulk Laser Heating**
Heating = **77 sec**
Isolation = **6.00 min**
Instrument = **ARGUS-VI-D**
Preferred Age = **Plateau Age**
Age Classification = **Eruption Age**
IGSN = **IESRS0040**
Rock Class = **Igneous>Volcanic>Mafic**
Lithology = **Trachybasalt**
Lat-Lon = **35°58.0'S - 1°11.5'W**
Age Equations = **Min et al. (2000)**
Negative Intensities = **Allowed**
Collector Calibrations = **40Ar 36Ar**
Decay 40K = **5.530 ± 0.048 E-10 1/a**
Decay 39Ar = **2.940 ± 0.016 E-07 1/h**
Decay 37Ar = **8.230 ± 0.012 E-04 1/h**
Decay 36Cl = **2.257 ± 0.015 E-06 1/a**
Decay 40K(EC,β^+) = **0.580 ± 0.009 E-10 1/a**
Decay 40K(β^-) = **4.950 ± 0.043 E-10 1/a**
Atmospheric 40/36(a) = **295.50**
Atmospheric 38/36(a) = **0.1869**
Production 39/37(ca) = **0.0006756 ± 0.0000089**
Production 38/37(ca) = **0.0000718 ± 0.0000092**
Production 36/37(ca) = **0.0002663 ± 0.0000004**
Production 40/39(k) = **0.003823 ± 0.000102**
Production 38/39(k) = **0.012031 ± 0.000019**
Production 36/38(cl) = **262.80 ± 1.71**
Scaling Ratio K/Ca = **0.430**
Abundance Ratio 40K/K = **1.1700 ± 0.0100 E-04**
Atomic Weight K = **39.0983 ± 0.0001 g**

Recoil pattern, but plateau may be acceptable.

Results	40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD	39Ar(k) (%,n)	K/Ca ± 2σ
Age Plateau		14.59860 ± 0.01725	**42.50 ± 0.17**	3.96	50.56	0.548 ± 0.065
Error Mean		± 0.12%	**± 0.41%**	0%	14	
		Full External Error ± 0.97		1.78	2σ Confidence Limit	
		Analytical Error ± 0.05		1.9909	Error Magnification	
Total Fusion Age		14.49089 ± 0.00644	**42.19 ± 0.17**		37	0.320 ± 0.001
		± 0.04%	**± 0.39%**			
		Full External Error ± 0.96				
		Analytical Error ± 0.02				
Normal Isochron	**906.24 ± 304.23**	14.50900 ± 0.04392	**42.24 ± 0.21**	1.13	50.56	
	± 33.57%	± 0.30%	**± 0.49%**	33%	14	
		Full External Error ± 0.97		1.82	2σ Confidence Limit	
		Analytical Error ± 0.13		1.0622	Error Magnification	
Inverse Isochron	**1047.71 ± 319.35**	14.49204 ± 0.04604	**42.19 ± 0.21**	1.09	50.56	
Clustered Points	**± 30.48%**	± 0.32%	**± 0.50%**	36%	14	
		Full External Error ± 0.97		1.82	2σ Confidence Limit	
		Analytical Error ± 0.13		1.0435	Error Magnification	
				1%	Spreading Factor	





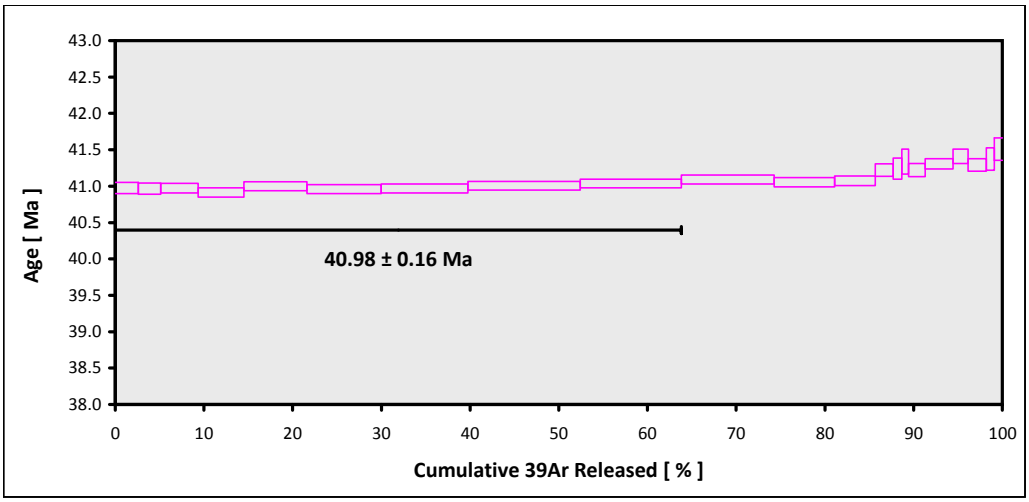
EXP#14D30840 > MV1203-D60-04 > Alkali-Feldspar > MV1203 (13-INT-04)
WALVIS RIDGE > CONTEST SEAMOUNT
14-OSU-04 (4B30-14) > Incremental Heating > Susan Schnur

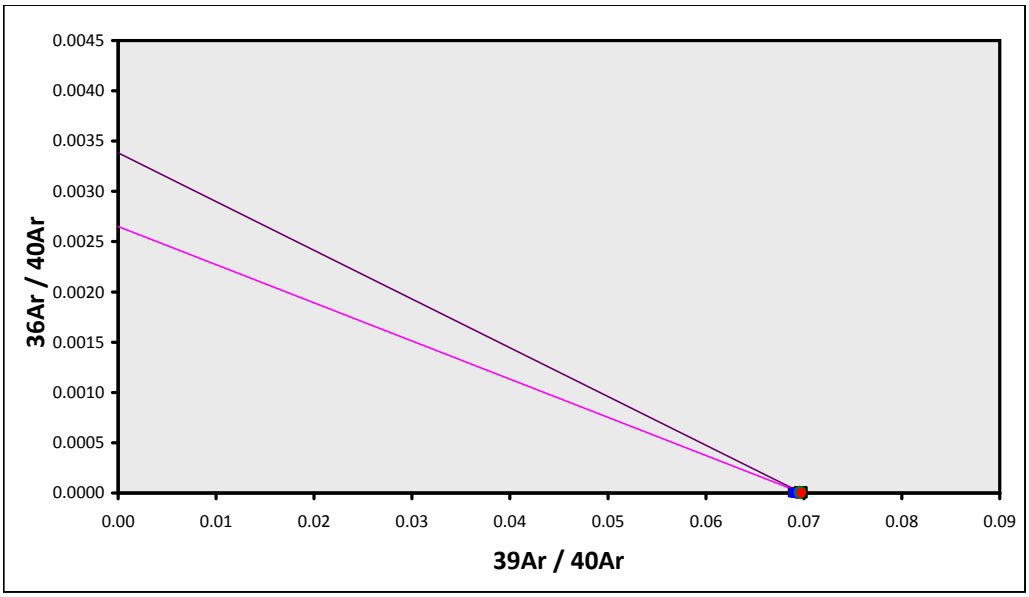
Information on Analysis and Constants Used in Calculations

Project = **MV1203 (13-INT-04)**
Sample = **MV1203-D60-04**
Material = **Alkali-Feldspar**
Location = **Contest Seamount**
Region = **Walvis Ridge**
Analyst = **Susan Schnur**
Irradiation = **14-OSU-04 (4B30-14)**
Position = **X: 0 | Y: 0 | Z/H: 43.98 mm**
FCT-NM Age = **28.201 ± 0.023 Ma**
FCT-NM Reference = **Kuiper et al (2008)**
FCT-NM 40Ar/39Ar Ratio = **9.82053 ± 0.01915**
FCT-NM J-value = **0.00160046 ± 0.00000312**
Air Shot 40Ar/36Ar = **303.5990 ± 0.5131**
Air Shot MDF = **0.99332222 ± 0.00070921 (LIN)**
Experiment Type = **Incremental Heating**
Extraction Method = **Bulk Laser Heating**
Heating = **77 sec**
Isolation = **6.00 min**
Instrument = **ARGUS-VI-D**
Preferred Age = **Plateau Age**
Age Classification = **Eruption Age**
IGSN = **IESRS0041**
Rock Class = **Igneous>Volcanic>Mafic**
Lithology = **Trachyte**
Lat-Lon = **36°17.3'S - 1°34.4'W**
Age Equations = **Min et al. (2000)**
Negative Intensities = **Allowed**
Collector Calibrations = **40Ar 36Ar**
Decay 40K = **5.530 ± 0.048 E-10 1/a**
Decay 39Ar = **2.940 ± 0.016 E-07 1/h**
Decay 37Ar = **8.230 ± 0.012 E-04 1/h**
Decay 36Cl = **2.257 ± 0.015 E-06 1/a**
Decay 40K(EC,β^+) = **0.580 ± 0.009 E-10 1/a**
Decay 40K(β^-) = **4.950 ± 0.043 E-10 1/a**
Atmospheric 40/36(a) = **295.50**
Atmospheric 38/36(a) = **0.1869**
Production 39/37(ca) = **0.0006756 ± 0.0000089**
Production 38/37(ca) = **0.0000718 ± 0.0000092**
Production 36/37(ca) = **0.0002663 ± 0.0000004**
Production 40/39(k) = **0.003823 ± 0.000102**
Production 38/39(k) = **0.012031 ± 0.000019**
Production 36/38(cl) = **262.80 ± 1.71**
Scaling Ratio K/Ca = **0.430**
Abundance Ratio 40K/K = **1.1700 ± 0.0100 E-04**
Atomic Weight K = **39.0983 ± 0.0001 g**

Relatively few steps in plateau, but fine.

Results	40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD	39Ar(k) (%,n)	K/Ca ± 2σ
Age Plateau		14.32102 ± 0.00843 ± 0.06%	**40.98 ± 0.16 ± 0.39%**	1.23 28%	63.83 9	11.3 ± 0.3
			Full External Error ± 0.93	2.00	2σ Confidence Limit	
			Analytical Error ± 0.02	1.1078	Error Magnification	
Total Fusion Age		14.34666 ± 0.00616 ± 0.04%	**41.05 ± 0.16 ± 0.39%**		21	11.6 ± 0.3
			Full External Error ± 0.94			
			Analytical Error ± 0.02			
Normal Isochron	**331.44 ± 409.70 ± ########**	14.31800 ± 0.03488 ± 0.24%	**40.97 ± 0.19 ± 0.45%**	1.40 20%	63.83 9	
			Full External Error ± 0.94	2.07	2σ Confidence Limit	
			Analytical Error ± 0.10	1.1822	Error Magnification	
Inverse Isochron Clustered Points	**377.26 ± 239.95 ± 63.60%**	14.31440 ± 0.03494 ± 0.24%	**40.96 ± 0.19 ± 0.45%**	1.37 21%	63.83 9	
			Full External Error ± 0.94	2.07	2σ Confidence Limit	
			Analytical Error ± 0.10	1.1725	Error Magnification	
				0%	Spreading Factor	





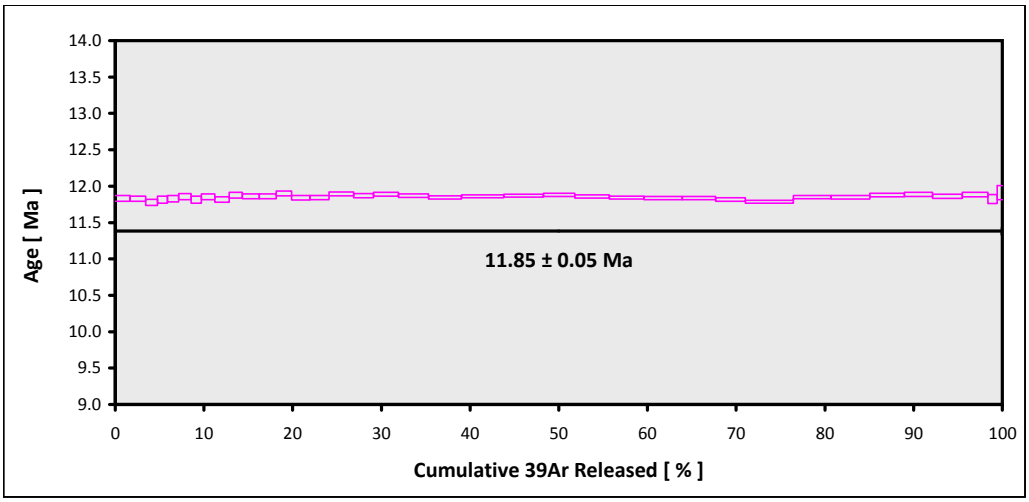
EXP#14D32588 > MV1203-D48-04 > Groundmass > MV1203 (13-INT-04)
WALVIS RIDGE > JAHONT GUYOT
14-OSU-04 (4B8-14) > Incremental Heating > Susan Schnur

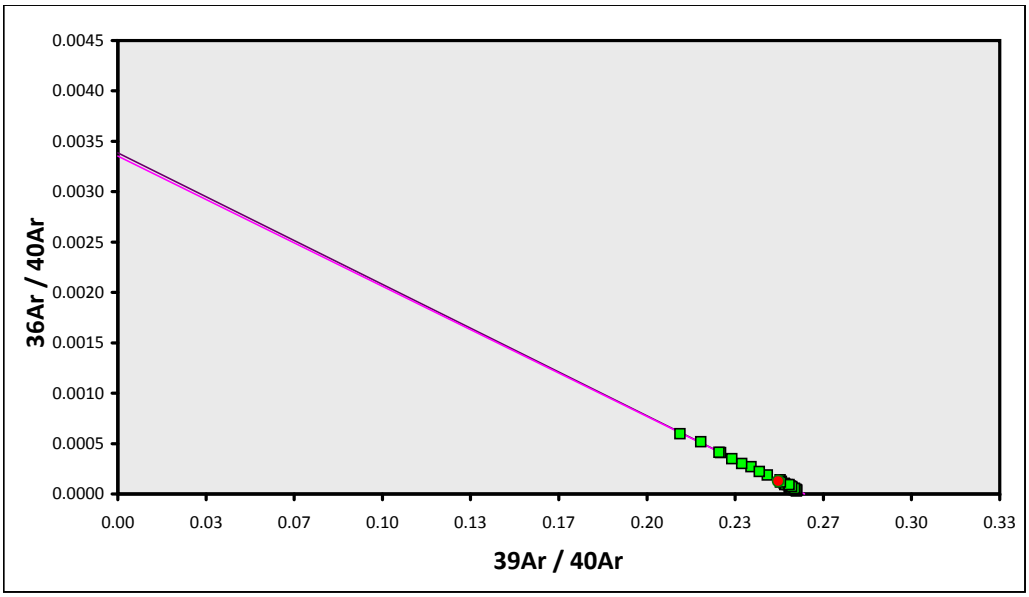
Information on Analysis and Constants Used in Calculations

Project = **MV1203 (13-INT-04)**
Sample = **MV1203-D48-04**
Material = **Groundmass**
Location = **Jahont Guyot**
Region = **Walvis Ridge**
Analyst = **Susan Schnur**
Irradiation = **14-OSU-04 (4B8-14)**
Position = **X: 0 | Y: 0 | Z/H: 15.11 mm**
FCT-NM Age = **28.201 ± 0.023 Ma**
FCT-NM Reference = **Kuiper et al (2008)**
FCT-NM 40Ar/39Ar Ratio = **9.21228 ± 0.01916**
FCT-NM J-value = **0.00170613 ± 0.00000355**
Air Shot 40Ar/36Ar = **303.6970 ± 0.4890**
Air Shot MDF = **0.99324360 ± 0.00069785 (LIN)**
Experiment Type = **Incremental Heating**
Extraction Method = **Bulk Laser Heating**
Heating = **77 sec**
Isolation = **6.00 min**
Instrument = **ARGUS-VI-D**
Preferred Age = **Plateau Age**
Age Classification = **Eruption Age**
IGSN = **IESRS0042**
Rock Class = **Igneous>Volcanic>Mafic**
Lithology = **Trachyte**
Lat-Lon = **39°33.1'S - 7°50.0'W**
Age Equations = **Min et al. (2000)**
Negative Intensities = **Allowed**
Collector Calibrations = **40Ar 36Ar**
Decay 40K = **5.530 ± 0.048 E-10 1/a**
Decay 39Ar = **2.940 ± 0.016 E-07 1/h**
Decay 37Ar = **8.230 ± 0.012 E-04 1/h**
Decay 36Cl = **2.257 ± 0.015 E-06 1/a**
Decay 40K(EC,β^+) = **0.580 ± 0.009 E-10 1/a**
Decay 40K(β^-) = **4.950 ± 0.043 E-10 1/a**
Atmospheric 40/36(a) = **295.50**
Atmospheric 38/36(a) = **0.1869**
Production 39/37(ca) = **0.0006756 ± 0.0000089**
Production 38/37(ca) = **0.0000718 ± 0.0000092**
Production 36/37(ca) = **0.0002663 ± 0.0000004**
Production 40/39(k) = **0.003823 ± 0.000102**
Production 38/39(k) = **0.012031 ± 0.000019**
Production 36/38(cl) = **262.80 ± 1.71**
Scaling Ratio K/Ca = **0.430**
Abundance Ratio 40K/K = **1.1700 ± 0.0100 E-04**
Atomic Weight K = **39.0983 ± 0.0001 g**

A little bumpy but distinct plateau. Plateau a bit short.

Results	40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD	39Ar(k) (%,n)	K/Ca ± 2σ
Age Plateau		3.85412 ± 0.00297	**11.85 ± 0.05**	3.92	100.00	5.9 ± 0.2
Error Mean		± 0.08%	**± 0.42%**	0%	37	
			Full External Error ± 0.27	1.47	2σ Confidence Limit	
			Analytical Error ± 0.01	1.9801	Error Magnification	
Total Fusion Age		3.85407 ± 0.00152	**11.85 ± 0.05**		37	6.3 ± 0.1
		± 0.04%	**± 0.42%**			
			Full External Error ± 0.27			
			Analytical Error ± 0.00			
Normal Isochron	**289.48 ± 7.64**	3.86042 ± 0.00489	**11.87 ± 0.05**	6.05	100.00	
Error Chron	**± 2.64%**	± 0.13%	**± 0.43%**	0%	37	
			Full External Error ± 0.27	1.48	2σ Confidence Limit	
			Analytical Error ± 0.01	2.4592	Error Magnification	
Inverse Isochron	**298.24 ± 6.22**	3.85294 ± 0.00405	**11.85 ± 0.05**	3.94	100.00	
Error Chron	**± 2.09%**	± 0.11%	**± 0.43%**	0%	37	
			Full External Error ± 0.27	1.48	2σ Confidence Limit	
			Analytical Error ± 0.01	1.9841	Error Magnification	
				17%	Spreading Factor	





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

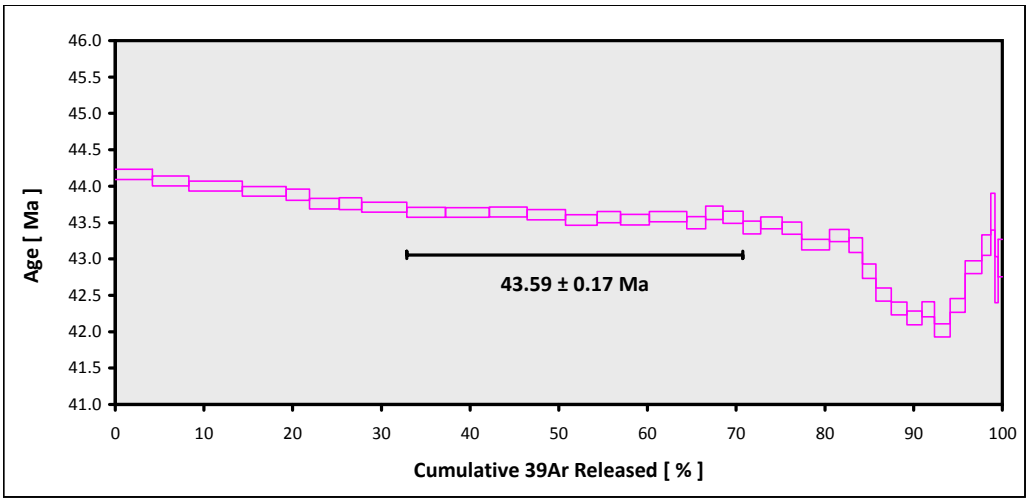
EXP#14D32639 > MV1203-D58-16 > Groundmass > MV1203 (13-INT-04)
WALVIS RIDGE > WANDERER GUYOT
14-OSU-04 (4B22-14) > Incremental Heating > Susan Schnur

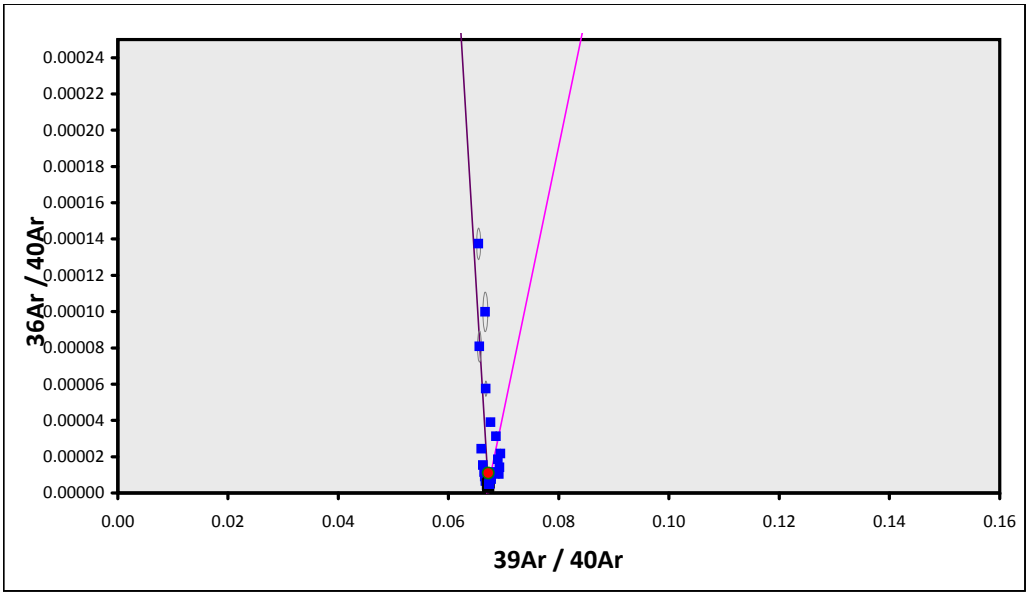
Information on Analysis and Constants Used in Calculations

Project = **MV1203 (13-INT-04)**
Sample = **MV1203-D58-16**
Material = **Groundmass**
Location = **Wanderer Guyot**
Region = **Walvis Ridge**
Analyst = **Susan Schnur**
Irradiation = **14-OSU-04 (4B22-14)**
Position = **X: 0 | Y: 0 | Z/H: 34.56 mm**
FCT-NM Age = **28.201 ± 0.023 Ma**
FCT-NM Reference = **Kuiper et al (2008)**
FCT-NM 40Ar/39Ar Ratio = **9.57110 ± 0.01914**
FCT-NM J-value = **0.00164217 ± 0.00000328**
Air Shot 40Ar/36Ar = **303.7070 ± 0.4920**
Air Shot MDF = **0.99323558 ± 0.00069920 (LIN)**
Experiment Type = **Incremental Heating**
Extraction Method = **Bulk Laser Heating**
Heating = **77 sec**
Isolation = **6.00 min**
Instrument = **ARGUS-VI-D**
Preferred Age = **Plateau Age**
Age Classification = **Eruption Age**
IGSN = **IESRS0043**
Rock Class = **Igneous>Volcanic>Felsic**
Lithology = **Trachyandesite**
Lat-Lon = **35°46.1'S - 0°58.0'W**
Age Equations = **Min et al. (2000)**
Negative Intensities = **Allowed**
Collector Calibrations = **40Ar 36Ar**
Decay 40K = **5.530 ± 0.048 E-10 1/a**
Decay 39Ar = **2.940 ± 0.016 E-07 1/h**
Decay 37Ar = **8.230 ± 0.012 E-04 1/h**
Decay 36Cl = **2.257 ± 0.015 E-06 1/a**
Decay 40K(EC,β^+) = **0.580 ± 0.009 E-10 1/a**
Decay 40K(β^-) = **4.950 ± 0.043 E-10 1/a**
Atmospheric 40/36(a) = **295.50**
Atmospheric 38/36(a) = **0.1869**
Production 39/37(ca) = **0.0006756 ± 0.0000089**
Production 38/37(ca) = **0.0000718 ± 0.0000092**
Production 36/37(ca) = **0.0002663 ± 0.0000004**
Production 40/39(k) = **0.003823 ± 0.000102**
Production 38/39(k) = **0.012031 ± 0.000019**
Production 36/38(cl) = **262.80 ± 1.71**
Scaling Ratio K/Ca = **0.430**
Abundance Ratio 40K/K = **1.1700 ± 0.0100 E-04**
Atomic Weight K = **39.0983 ± 0.0001 g**

Recoil, high-T steps are variable.

Results	40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD	39Ar(k) (%,n)	K/Ca ± 2σ
Age Plateau		14.85796 ± 0.01023	**43.59 ± 0.17**	1.79	37.91	1.93 ± 0.04
		± 0.07%	**± 0.40%**	6%	11	
		Full External Error ± 0.99		1.89	2σ Confidence Limit	
		Analytical Error ± 0.03		1.3377	Error Magnification	
Total Fusion Age		14.82697 ± 0.00473	**43.50 ± 0.17**		37	1.77 ± 0.01
		± 0.03%	**± 0.40%**			
		Full External Error ± 0.99				
		Analytical Error ± 0.01				
Normal Isochron	652.20 **± 729.07**	14.92105 ± 0.04788	**43.77 ± 0.22**	0.86	37.91	
	########	± 0.32%	**± 0.51%**	56%	11	
		Full External Error ± 1.01		1.94	2σ Confidence Limit	
		Analytical Error ± 0.14		1.0000	Error Magnification	
Inverse Isochron	1020.99 **± 691.22**	14.94371 ± 0.05338	**43.84 ± 0.23**	0.83	37.91	
Clustered Points	**± 67.70%**	± 0.36%	**± 0.53%**	59%	11	
		Full External Error ± 1.01		1.94	2σ Confidence Limit	
		Analytical Error ± 0.15		1.0000	Error Magnification	
				0%	Spreading Factor	





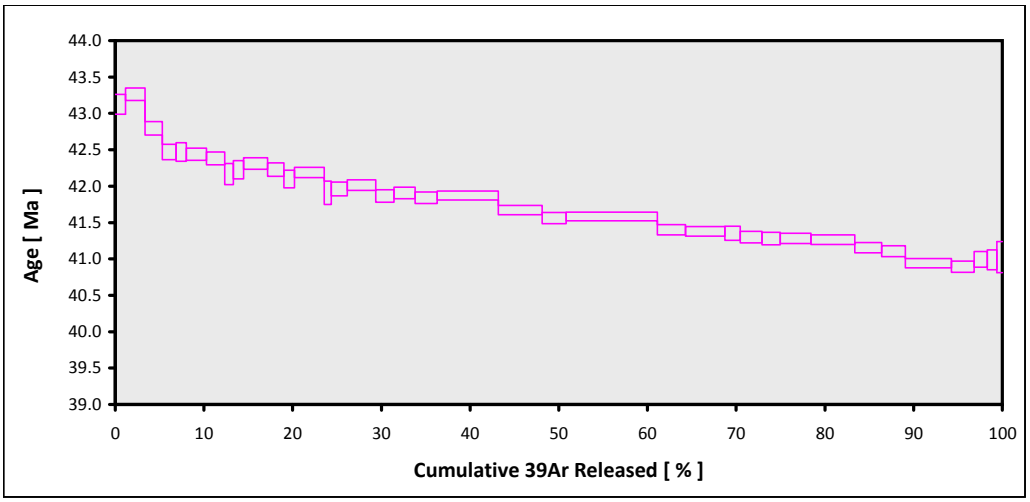
EXP#14D32740 > MV1203-D60-02 > Groundmass > MV1203 (13-INT-04)
WALVIS RIDGE > CONTEST SEAMOUNT
14-OSU-04 (4B26-14) > Incremental Heating > Susan Schnur

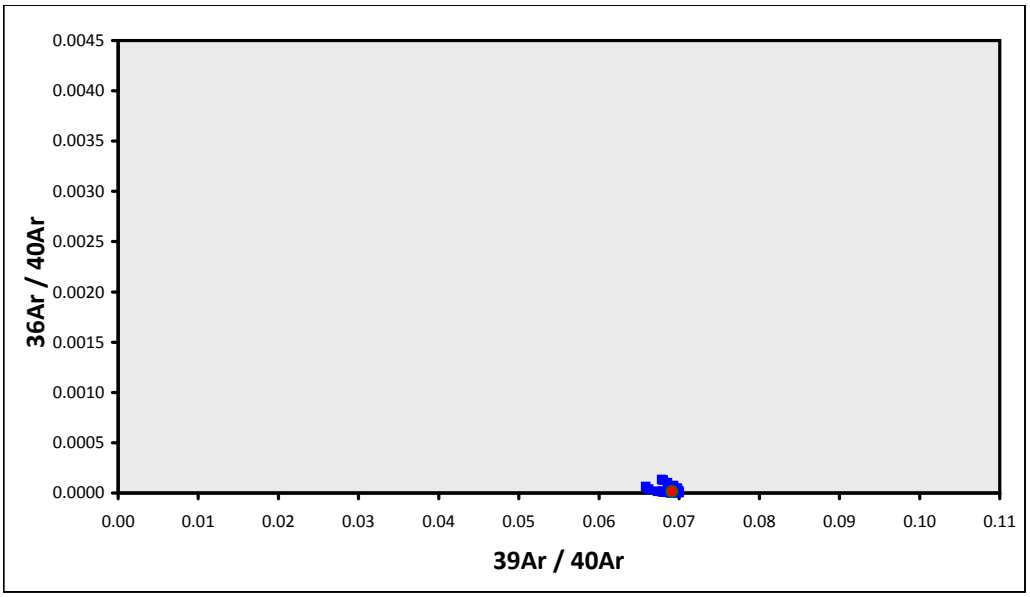
Information on Analysis and Constants Used in Calculations

Project = **MV1203 (13-INT-04)**
Sample = **MV1203-D60-02**
Material = **Groundmass**
Location = **Contest Seamount**
Region = **Walvis Ridge**
Analyst = **Susan Schnur**
Irradiation = **14-OSU-04 (4B26-14)**
Position = **X: 0 | Y: 0 | Z/H: 39.66 mm**
FCT-NM Age = **28.201 ± 0.023 Ma**
FCT-NM Reference = **Kuiper et al (2008)**
FCT-NM 40Ar/39Ar Ratio = **9.70001 ± 0.01911**
FCT-NM J-value = **0.00162035 ± 0.00000319**
Air Shot 40Ar/36Ar = **303.7070 ± 0.4920**
Air Shot MDF = **0.99323558 ± 0.00069920 (LIN)**
Experiment Type = **Incremental Heating**
Extraction Method = **Bulk Laser Heating**
Heating = **77 sec**
Isolation = **6.00 min**
Instrument = **ARGUS-VI-D**
Preferred Age = Undefined
Age Classification = Undefined
IGSN = **IESRS0044**
Rock Class = **Igneous>Volcanic>Mafic**
Lithology = **Trachyte**
Lat-Lon = **36°17.3'S - 1°34.4'W**
Age Equations = **Min et al. (2000)**
Negative Intensities = **Allowed**
Collector Calibrations = **40Ar 36Ar**
Decay 40K = **5.530 ± 0.048 E-10 1/a**
Decay 39Ar = **2.940 ± 0.016 E-07 1/h**
Decay 37Ar = **8.230 ± 0.012 E-04 1/h**
Decay 36Cl = **2.257 ± 0.015 E-06 1/a**
Decay 40K(EC,β^+) = **0.580 ± 0.009 E-10 1/a**
Decay 40K(β^-) = **4.950 ± 0.043 E-10 1/a**
Atmospheric 40/36(a) = **295.50**
Atmospheric 38/36(a) = **0.1869**
Production 39/37(ca) = **0.0006756 ± 0.0000089**
Production 38/37(ca) = **0.0000718 ± 0.0000092**
Production 36/37(ca) = **0.0002663 ± 0.0000004**
Production 40/39(k) = **0.003823 ± 0.000102**
Production 38/39(k) = **0.012031 ± 0.000019**
Production 36/38(cl) = **262.80 ± 1.71**
Scaling Ratio K/Ca = **0.430**
Abundance Ratio 40K/K = **1.1700 ± 0.0100 E-04**
Atomic Weight K = **39.0983 ± 0.0001 g**

Terrible, barely any plateau.

Results	40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD	39Ar(k) (%,n)	K/Ca ± 2σ
Age Plateau						
Cannot Calculate						
Total Fusion Age		14.39916 ± 0.00495 ± 0.03%	**41.71 ± 0.16 ± 0.39%**		37	5.77 ± 0.13
			Full External Error ± 0.95			
			Analytical Error ± 0.01			
Normal Isochron						
Cannot Calculate						
Inverse Isochron						
Cannot Calculate						





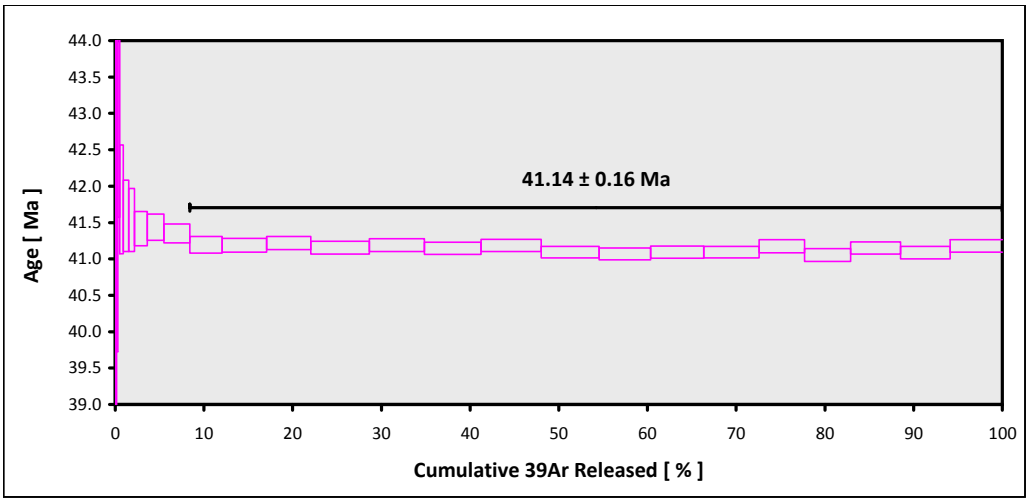
EXP#14D32791 > MV1203-D60-02 > Biotite > MV1203 (13-INT-04)
WALVIS RIDGE > CONTEST SEAMOUNT
14-OSU-04 (4B28-14) > Incremental Heating > Susan Schnur

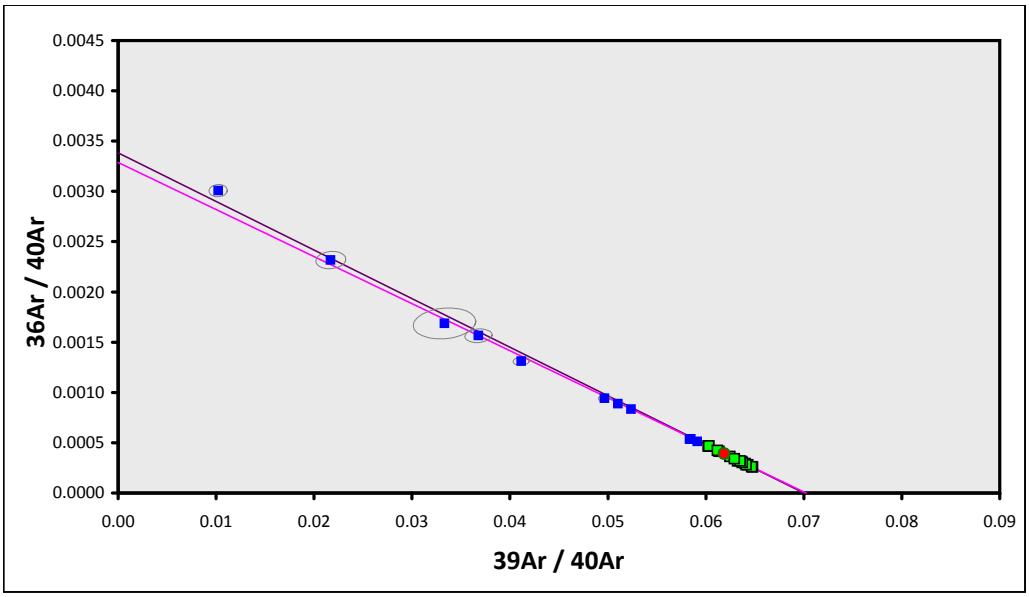
Information on Analysis and Constants Used in Calculations

Project = **MV1203 (13-INT-04)**
Sample = **MV1203-D60-02**
Material = **Biotite**
Location = **Contest Seamount**
Region = **Walvis Ridge**
Analyst = **Susan Schnur**
Irradiation = **14-OSU-04 (4B28-14)**
Position = **X: 0 | Y: 0 | Z/H: 41.82 mm**
FCT-NM Age = **28.201 ± 0.023 Ma**
FCT-NM Reference = **Kuiper et al (2008)**
FCT-NM 40Ar/39Ar Ratio = **9.75898 ± 0.01913**
FCT-NM J-value = **0.00161056 ± 0.00000316**
Air Shot 40Ar/36Ar = **303.7090 ± 0.4981**
Air Shot MDF = **0.99323398 ± 0.00070196 (LIN)**
Experiment Type = **Incremental Heating**
Extraction Method = **Bulk Laser Heating**
Heating = **77 sec**
Isolation = **6.00 min**
Instrument = **ARGUS-VI-D**
Preferred Age = **Plateau Age**
Age Classification = **Eruption Age**
IGSN = **IESRS0045**
Rock Class = **Igneous>Volcanic>Mafic**
Lithology = **Trachyte**
Lat-Lon = **36°17.3'S - 1°34.4'W**
Age Equations = **Min et al. (2000)**
Negative Intensities = **Allowed**
Collector Calibrations = **40Ar 36Ar**
Decay 40K = **5.530 ± 0.048 E-10 1/a**
Decay 39Ar = **2.940 ± 0.016 E-07 1/h**
Decay 37Ar = **8.230 ± 0.012 E-04 1/h**
Decay 36Cl = **2.257 ± 0.015 E-06 1/a**
Decay 40K(EC,β^+) = **0.580 ± 0.009 E-10 1/a**
Decay 40K(β^-) = **4.950 ± 0.043 E-10 1/a**
Atmospheric 40/36(a) = **295.50**
Atmospheric 38/36(a) = **0.1869**
Production 39/37(ca) = **0.0006756 ± 0.0000089**
Production 38/37(ca) = **0.0000718 ± 0.0000092**
Production 36/37(ca) = **0.0002663 ± 0.0000004**
Production 40/39(k) = **0.003823 ± 0.000102**
Production 38/39(k) = **0.012031 ± 0.000019**
Production 36/38(cl) = **262.80 ± 1.71**
Scaling Ratio K/Ca = **0.430**
Abundance Ratio 40K/K = **1.1700 ± 0.0100 E-04**
Atomic Weight K = **39.0983 ± 0.0001 g**

Good plateau

Results	40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD	39Ar(k) (%,n)	K/Ca ± 2σ
Age Plateau		14.28714 ± 0.00903	**41.14 ± 0.16**	1.42	91.58	26 ± 49
		± 0.06%	**± 0.39%**	13%	16	
		Full External Error ± 0.94		1.73	2σ Confidence Limit	
		Analytical Error ± 0.03		1.1902	Error Magnification	
Total Fusion Age		14.29689 ± 0.00784	**41.17 ± 0.16**		27	915 ± 5010
		± 0.05%	**± 0.39%**			
		Full External Error ± 0.94				
		Analytical Error ± 0.02				
Normal Isochron	**304.80 ± 6.03**	14.23632 ± 0.03370	**40.99 ± 0.19**	0.93	91.58	
	± 1.98%	± 0.24%	**± 0.45%**	53%	16	
		Full External Error ± 0.94		1.76	2σ Confidence Limit	
		Analytical Error ± 0.10		1.0000	Error Magnification	
Inverse Isochron	**304.11 ± 6.02**	14.24022 ± 0.03370	**41.00 ± 0.19**	0.93	91.58	
	± 1.98%	± 0.24%	**± 0.45%**	53%	16	
		Full External Error ± 0.94		1.76	2σ Confidence Limit	
		Analytical Error ± 0.10		1.0000	Error Magnification	
				6%	Spreading Factor	





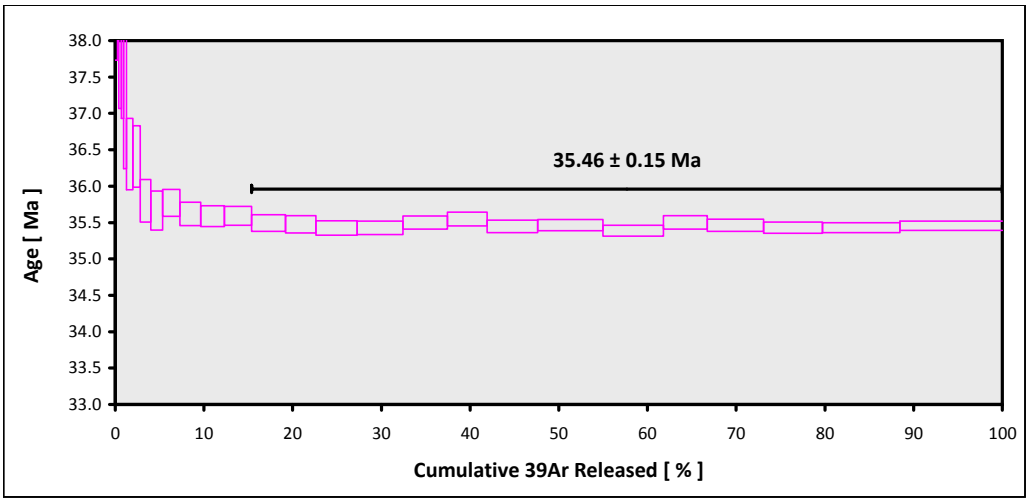
EXP#14D32879 > MV1203-D56-18 > Biotite > MV1203 (13-INT-04)
WALVIS RIDGE > HARPOONER GUYOT
14-OSU-04 (4B17-14) > Incremental Heating > Susan Schnur

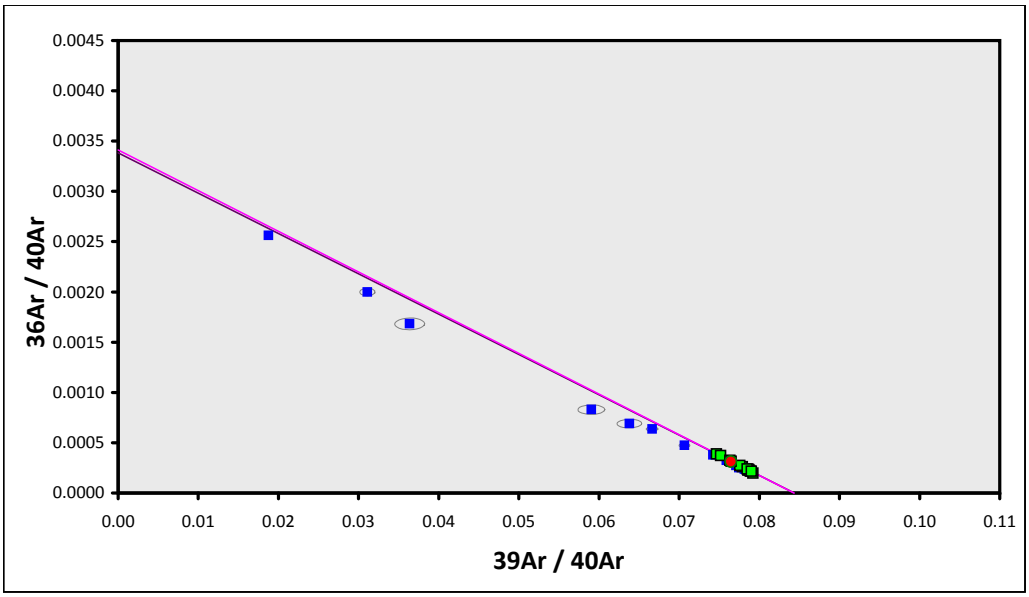
Information on Analysis and Constants Used in Calculations

Project = **MV1203 (13-INT-04)**
Sample = **MV1203-D56-18**
Material = **Biotite**
Location = **Harpooner Guyot**
Region = **Walvis Ridge**
Analyst = **Susan Schnur**
Irradiation = **14-OSU-04 (4B17-14)**
Position = **X: 0 | Y: 0 | Z/H: 27 mm**
FCT-NM Age = **28.201 ± 0.023 Ma**
FCT-NM Reference = **Kuiper et al (2008)**
FCT-NM 40Ar/39Ar Ratio = **9.40663 ± 0.01919**
FCT-NM J-value = **0.00167088 ± 0.00000341**
Air Shot 40Ar/36Ar = **303.7070 ± 0.4981**
Air Shot MDF = **0.99323558 ± 0.00070196 (LIN)**
Experiment Type = **Incremental Heating**
Extraction Method = **Bulk Laser Heating**
Heating = **60 sec**
Isolation = **6.00 min**
Instrument = **ARGUS-VI-D**
Preferred Age = **Plateau Age**
Age Classification = **Eruption Age**
IGSN = **IESRS0046**
Rock Class = **Igneous>Volcanic>Mafic**
Lithology = **Trachyte**
Lat-Lon = **37°18.2'S - 3°49.3'W**
Age Equations = **Min et al. (2000)**
Negative Intensities = **Allowed**
Collector Calibrations = **40Ar 36Ar**
Decay 40K = **5.530 ± 0.048 E-10 1/a**
Decay 39Ar = **2.940 ± 0.016 E-07 1/h**
Decay 37Ar = **8.230 ± 0.012 E-04 1/h**
Decay 36Cl = **2.257 ± 0.015 E-06 1/a**
Decay 40K(EC,β^+) = **0.580 ± 0.009 E-10 1/a**
Decay 40K(β^-) = **4.950 ± 0.043 E-10 1/a**
Atmospheric 40/36(a) = **295.50**
Atmospheric 38/36(a) = **0.1869**
Production 39/37(ca) = **0.0006756 ± 0.0000089**
Production 38/37(ca) = **0.0000718 ± 0.0000092**
Production 36/37(ca) = **0.0002663 ± 0.0000004**
Production 40/39(k) = **0.003823 ± 0.000102**
Production 38/39(k) = **0.012031 ± 0.000019**
Production 36/38(cl) = **262.80 ± 1.71**
Scaling Ratio K/Ca = **0.430**
Abundance Ratio 40K/K = **1.1700 ± 0.0100 E-04**
Atomic Weight K = **39.0983 ± 0.0001 g**

Good plateau

Results	40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD	39Ar(k) (%,n)	K/Ca ± 2σ
Age Plateau		11.85028 ± 0.00764 ± 0.06%	**35.46 ± 0.15 ± 0.41%**	0.87	84.65	5.6 ± 0.6
			Full External Error ± 0.81	59%	14	
			Analytical Error ± 0.02	1.78	2σ Confidence Limit	
				1.0000	Error Magnification	
Total Fusion Age		11.87757 ± 0.00788 ± 0.07%	**35.54 ± 0.15 ± 0.41%**		27	8.6 ± 0.9
			Full External Error ± 0.81			
			Analytical Error ± 0.02			
Normal Isochron	**291.67 ± 10.46 ± 3.59%**	11.86299 ± 0.03554 ± 0.30%	**35.49 ± 0.18 ± 0.50%**	0.92	84.65	
			Full External Error ± 0.82	52%	14	
			Analytical Error ± 0.11	1.82	2σ Confidence Limit	
				1.0000	Error Magnification	
Inverse Isochron	**293.00 ± 10.45 ± 3.57%**	11.85860 ± 0.03552 ± 0.30%	**35.48 ± 0.18 ± 0.50%**	0.92	84.65	
			Full External Error ± 0.82	52%	14	
			Analytical Error ± 0.11	1.82	2σ Confidence Limit	
				1.0000	Error Magnification	
				5%	Spreading Factor	





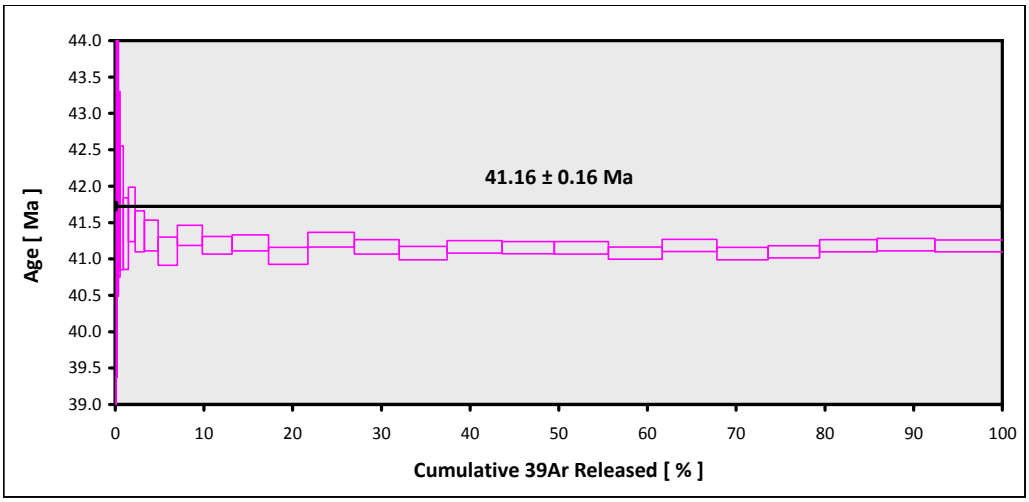
EXP#14D34726 > MV1203-D60-04 > Biotite > MV1203 (13-INT-04)
WALVIS RIDGE > CONTEST SEAMOUNT
14-OSU-04 (R98) > Incremental Heating > Dan Miggins

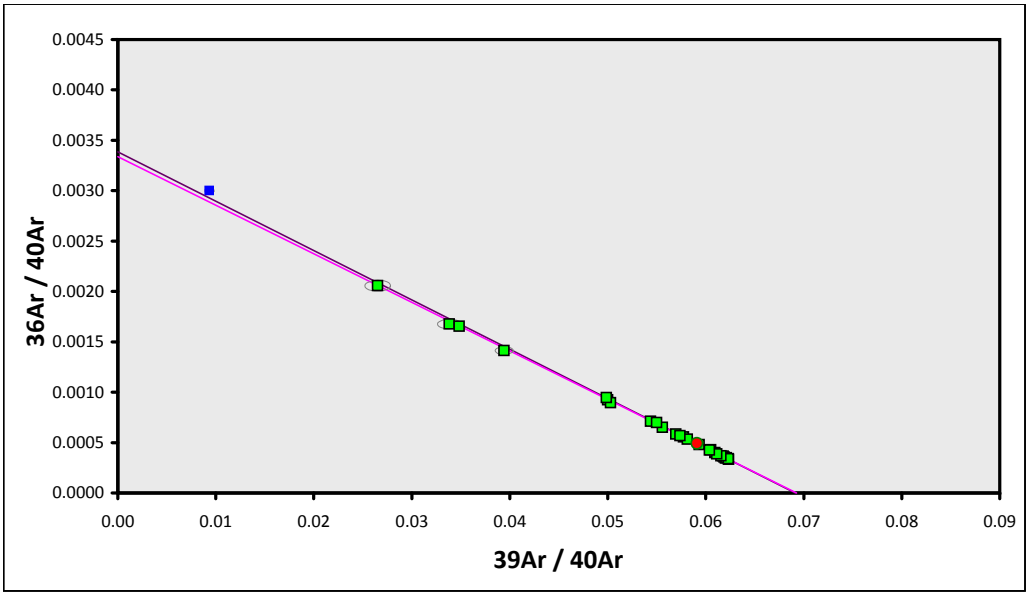
Information on Analysis and Constants Used in Calculations

Project = **MV1203 (13-INT-04)**
Sample = **MV1203-D60-04**
Material = **Biotite**
Location = **Contest Seamount**
Region = **Walvis Ridge**
Analyst = **Dan Miggins**
Irradiation = **14-OSU-04 (R98)**
Position = **X: 0 | Y: 0 | Z/H: 45.82 mm**
FCT-NM Age = **28.201 ± 0.023 Ma**
FCT-NM Reference = **Kuiper et al (2008)**
FCT-NM 40Ar/39Ar Ratio = **9.87502 ± 0.01916**
FCT-NM J-value = **0.00159163 ± 0.00000309**
Air Shot 40Ar/36Ar = **303.3370 ± 0.5096**
Air Shot MDF = **0.99353266 ± 0.00070841 (LIN)**
Experiment Type = **Incremental Heating**
Extraction Method = **Bulk Laser Heating**
Heating = **60 sec**
Isolation = **6.00 min**
Instrument = **ARGUS-VI-D**
Preferred Age = **Plateau Age**
Age Classification = **Eruption Age**
IGSN = **IESRS0047**
Rock Class = **Igneous>Volcanic>Mafic**
Lithology = **Trachyte**
Lat-Lon = **36°17.3'S - 1°34.4'W**
Age Equations = **Min et al. (2000)**
Negative Intensities = **Allowed**
Collector Calibrations = **40Ar 36Ar**
Decay 40K = **5.530 ± 0.048 E-10 1/a**
Decay 39Ar = **2.940 ± 0.016 E-07 1/h**
Decay 37Ar = **8.230 ± 0.012 E-04 1/h**
Decay 36Cl = **2.257 ± 0.015 E-06 1/a**
Decay 40K(EC,β^+) = **0.580 ± 0.009 E-10 1/a**
Decay 40K(β^-) = **4.950 ± 0.043 E-10 1/a**
Atmospheric 40/36(a) = **295.50**
Atmospheric 38/36(a) = **0.1869**
Production 39/37(ca) = **0.0006756 ± 0.0000089**
Production 38/37(ca) = **0.0000718 ± 0.0000092**
Production 36/37(ca) = **0.0002663 ± 0.0000004**
Production 40/39(k) = **0.003823 ± 0.000102**
Production 38/39(k) = **0.012031 ± 0.000019**
Production 36/38(cl) = **262.80 ± 1.71**
Scaling Ratio K/Ca = **0.430**
Abundance Ratio 40K/K = **1.1700 ± 0.0100 E-04**
Atomic Weight K = **39.0983 ± 0.0001 g**

Good plateau

Results	40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD	39Ar(k) (%,n)	K/Ca ± 2σ
Age Plateau		14.46501 ± 0.01071	**41.16 ± 0.16**	1.89	99.90	1 ± 1
Error Mean		± 0.07%	**± 0.39%**	0%	26	
		Full External Error ± 0.94		1.57	2σ Confidence Limit	
		Analytical Error ± 0.03		1.3765	Error Magnification	
Total Fusion Age		14.46665 ± 0.00819	**41.17 ± 0.16**		27	440 ± 1507
		± 0.06%	**± 0.39%**			
		Full External Error ± 0.94				
		Analytical Error ± 0.02				
Normal Isochron	**299.78 ± 3.51**	14.43345 ± 0.02746	**41.07 ± 0.18**	1.61	99.90	
Error Chron	**± 1.17%**	± 0.19%	**± 0.43%**	3%	26	
		Full External Error ± 0.94		1.58	2σ Confidence Limit	
		Analytical Error ± 0.08		1.2704	Error Magnification	
Inverse Isochron	**299.63 ± 3.50**	14.43489 ± 0.02743	**41.08 ± 0.18**	1.61	99.90	
Error Chron	**± 1.17%**	± 0.19%	**± 0.43%**	3%	26	
		Full External Error ± 0.94		1.58	2σ Confidence Limit	
		Analytical Error ± 0.08		1.2681	Error Magnification	
				52%	Spreading Factor	





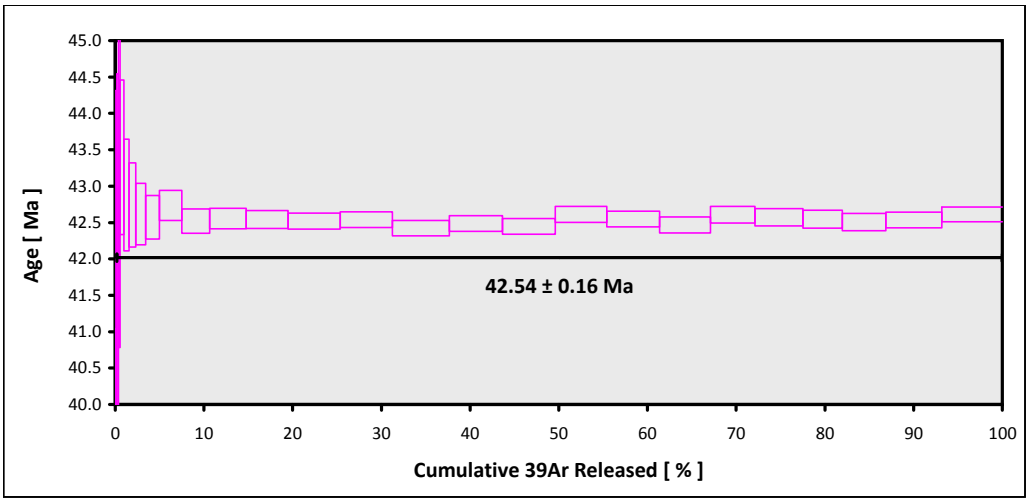
EXP#14D34764 > MV1203-D61-06A > Biotite > MV1203 (13-INT-04)
WALVIS RIDGE > MAYBE SEAMOUNT
14-OSU-04 (R98) > Incremental Heating > Dan Miggins

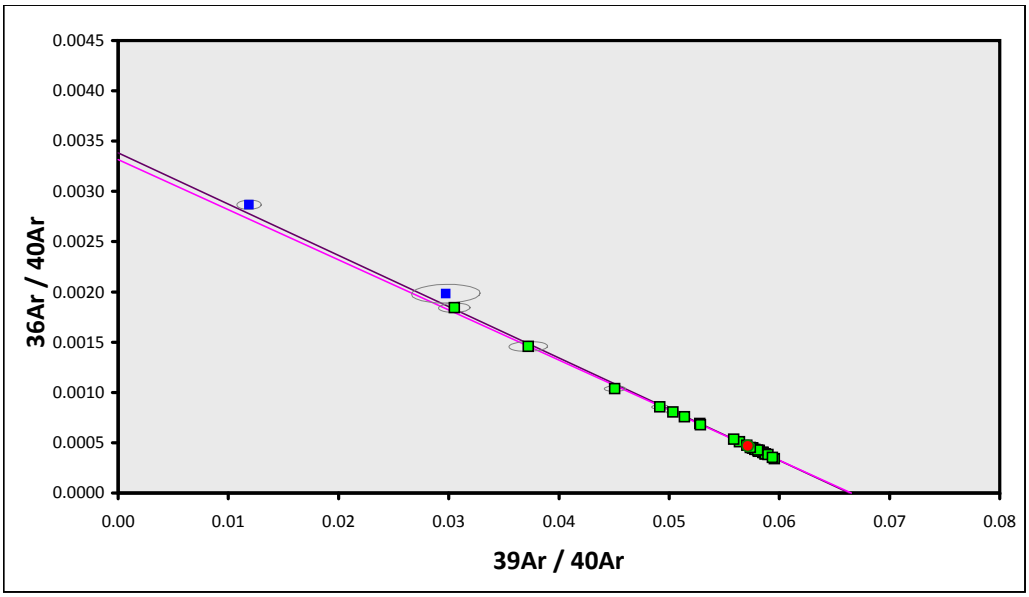
Information on Analysis and Constants Used in Calculations

Project = **MV1203 (13-INT-04)**
Sample = **MV1203-D61-06A**
Material = **Biotite**
Location = **Maybe Seamount**
Region = **Walvis Ridge**
Analyst = **Dan Miggins**
Irradiation = **14-OSU-04 (R98)**
Position = **X: 0 | Y: 0 | Z/H: 48.36 mm**
FCT-NM Age = **28.201 ± 0.023 Ma**
FCT-NM Reference = **Kuiper et al (2008)**
FCT-NM 40Ar/39Ar Ratio = **9.95332 ± 0.01911**
FCT-NM J-value = **0.00157911 ± 0.00000303**
Air Shot 40Ar/36Ar = **303.3300 ± 0.5096**
Air Shot MDF = **0.99353829 ± 0.00070843 (LIN)**
Experiment Type = **Incremental Heating**
Extraction Method = **Bulk Laser Heating**
Heating = **60 sec**
Isolation = **6.00 min**
Instrument = **ARGUS-VI-D**
Preferred Age = **Plateau Age**
Age Classification = **Eruption Age**
IGSN = **IESRS0048**
Rock Class = **Igneous>Volcanic>Mafic**
Lithology = **Phonolitic-Tephrite**
Lat-Lon = **37°12.1'S - 1°08.5'W**
Age Equations = **Min et al. (2000)**
Negative Intensities = **Allowed**
Collector Calibrations = **40Ar 36Ar**
Decay 40K = **5.530 ± 0.048 E-10 1/a**
Decay 39Ar = **2.940 ± 0.016 E-07 1/h**
Decay 37Ar = **8.230 ± 0.012 E-04 1/h**
Decay 36Cl = **2.257 ± 0.015 E-06 1/a**
Decay 40K(EC,β^+) = **0.580 ± 0.009 E-10 1/a**
Decay 40K(β^-) = **4.950 ± 0.043 E-10 1/a**
Atmospheric 40/36(a) = **295.50**
Atmospheric 38/36(a) = **0.1869**
Production 39/37(ca) = **0.0006756 ± 0.0000089**
Production 38/37(ca) = **0.0000718 ± 0.0000092**
Production 36/37(ca) = **0.0002663 ± 0.0000004**
Production 40/39(k) = **0.003823 ± 0.000102**
Production 38/39(k) = **0.012031 ± 0.000019**
Production 36/38(cl) = **262.80 ± 1.71**
Scaling Ratio K/Ca = **0.430**
Abundance Ratio 40K/K = **1.1700 ± 0.0100 E-04**
Atomic Weight K = **39.0983 ± 0.0001 g**

Good plateau

Results	40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD	39Ar(k) (%,n)	K/Ca ± 2σ
Age Plateau		15.07281 ± 0.00987	**42.54 ± 0.16**	1.03	99.83	5.8 ± 2.2
		± 0.07%	**± 0.38%**	42%	25	
		Full External Error ± 0.97		1.58	2σ Confidence Limit	
		Analytical Error ± 0.03		1.0140	Error Magnification	
Total Fusion Age		15.07304 ± 0.01053	**42.54 ± 0.16**		27	16.0 ± 3.3
		± 0.07%	**± 0.39%**			
		Full External Error ± 0.97				
		Analytical Error ± 0.03				
Normal Isochron	**301.40 ± 5.96**	15.02862 ± 0.04555	**42.41 ± 0.21**	0.90	99.83	
	± 1.98%	± 0.30%	**± 0.48%**	59%	25	
		Full External Error ± 0.97		1.59	2σ Confidence Limit	
		Analytical Error ± 0.13		1.0000	Error Magnification	
Inverse Isochron	**301.42 ± 5.95**	15.02870 ± 0.04552	**42.41 ± 0.21**	0.90	99.83	
	± 1.97%	± 0.30%	**± 0.48%**	59%	25	
		Full External Error ± 0.97		1.59	2σ Confidence Limit	
		Analytical Error ± 0.13		1.0000	Error Magnification	
				44%	Spreading Factor	





EXP#15D03834 > MV1203-D62-03 > Groundmass > MV1203 (13-INT-04)
WALVIS RIDGE > MAYBE SEAMOUNT
14-OSU-04 (R98) > Incremental Heating > Susan Schnur

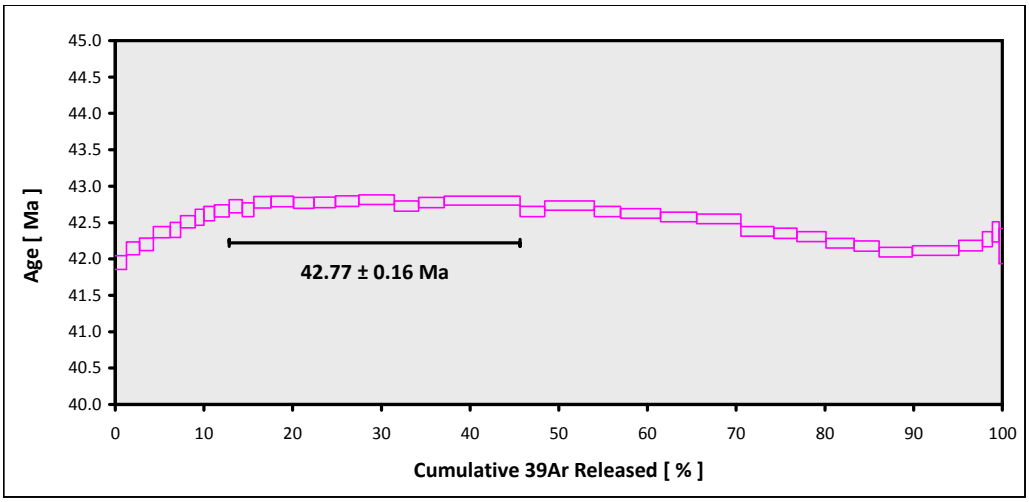
Information on Analysis and Constants Used in Calculations

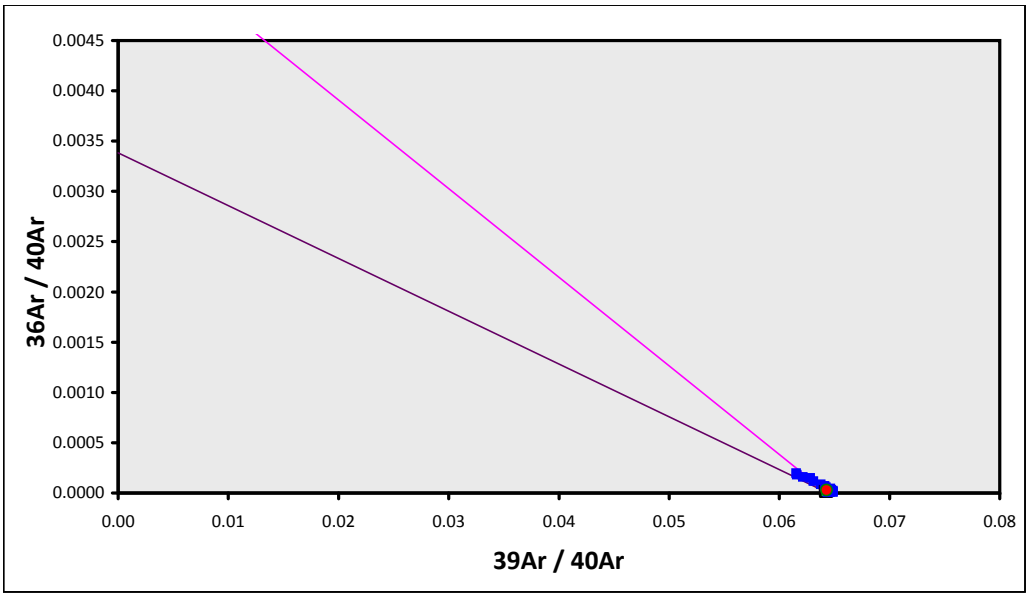
Project = **MV1203 (13-INT-04)**
Sample = **MV1203-D62-03**
Material = **Groundmass**
Location = **Maybe Seamount**
Region = **Walvis Ridge**
Analyst = **Susan Schnur**
Irradiation = **14-OSU-04 (R98)**
Position = **X: 0 | Y: 0 | Z/H: 55.4 mm**
FCT-NM Age = **28.201 ± 0.023 Ma**
FCT-NM Reference = **Kuiper et al (2008)**
FCT-NM 40Ar/39Ar Ratio = **10.18912 ± 0.01916**
FCT-NM J-value = **0.00154257 ± 0.00000290**
Air Shot 40Ar/36Ar = **303.4910 ± 0.5311**
Air Shot MDF = **0.99340892 ± 0.00071805 (LIN)**
Experiment Type = **Incremental Heating**
Extraction Method = **Bulk Laser Heating**
Heating = **77 sec**
Isolation = **6.00 min**
Instrument = **ARGUS-VI-D**
Preferred Age = **Plateau Age**
Age Classification = **Eruption Age**
IGSN = **IESRS0049**
Rock Class = **Igneous>Volcanic>Mafic**
Lithology = **Trachyandesite**
Lat-Lon = **37°14.8'S - 1°09.6'W**
Age Equations = **Min et al. (2000)**
Negative Intensities = **Allowed**
Collector Calibrations = **40Ar 36Ar**
Decay 40K = **5.530 ± 0.048 E-10 1/a**
Decay 39Ar = **2.940 ± 0.016 E-07 1/h**
Decay 37Ar = **8.230 ± 0.012 E-04 1/h**
Decay 36Cl = **2.257 ± 0.015 E-06 1/a**
Decay 40K(EC,β^+) = **0.580 ± 0.009 E-10 1/a**
Decay 40K(β^-) = **4.950 ± 0.043 E-10 1/a**
Atmospheric 40/36(a) = **295.50**
Atmospheric 38/36(a) = **0.1869**
Production 39/37(ca) = **0.0006756 ± 0.0000089**
Production 38/37(ca) = **0.0000718 ± 0.0000092**
Production 36/37(ca) = **0.0002663 ± 0.0000004**
Production 40/39(k) = **0.003823 ± 0.000102**
Production 38/39(k) = **0.012031 ± 0.000019**
Production 36/38(cl) = **262.80 ± 1.71**
Scaling Ratio K/Ca = **0.430**
Abundance Ratio 40K/K = **1.1700 ± 0.0100 E-04**
Atomic Weight K = **39.0983 ± 0.0001 g**

Not great, excess argon. Small plateau is acceptable.

Results

Results	40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD	39Ar(k) (%,n)	K/Ca ± 2σ
Age Plateau		15.51656 ± 0.00814 ± 0.05%	**42.77 ± 0.16 ± 0.38%**	0.99 45%	32.80 11	2.25 ± 0.11
			Full External Error ± 0.97	1.89	2σ Confidence Limit	
			Analytical Error ± 0.02	1.0000	Error Magnification	
Total Fusion Age		15.42676 ± 0.00482 ± 0.03%	**42.53 ± 0.16 ± 0.37%**		37	2.47 ± 0.07
			Full External Error ± 0.97			
			Analytical Error ± 0.01			
Normal Isochron	**215.61 ± 136.88 ± 63.48%**	15.53034 ± 0.02671 ± 0.17%	**42.81 ± 0.17 ± 0.41%**	0.85 57%	32.80 11	
			Full External Error ± 0.98	1.94	2σ Confidence Limit	
			Analytical Error ± 0.07	1.0000	Error Magnification	
Inverse Isochron Clustered Points	**176.32 ± 95.99 ± 54.44%**	15.53860 ± 0.02667 ± 0.17%	**42.83 ± 0.17 ± 0.41%**	0.79 62%	32.80 11	
			Full External Error ± 0.98	1.94	2σ Confidence Limit	
			Analytical Error ± 0.07	1.0000	Error Magnification	
				0%	Spreading Factor	





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

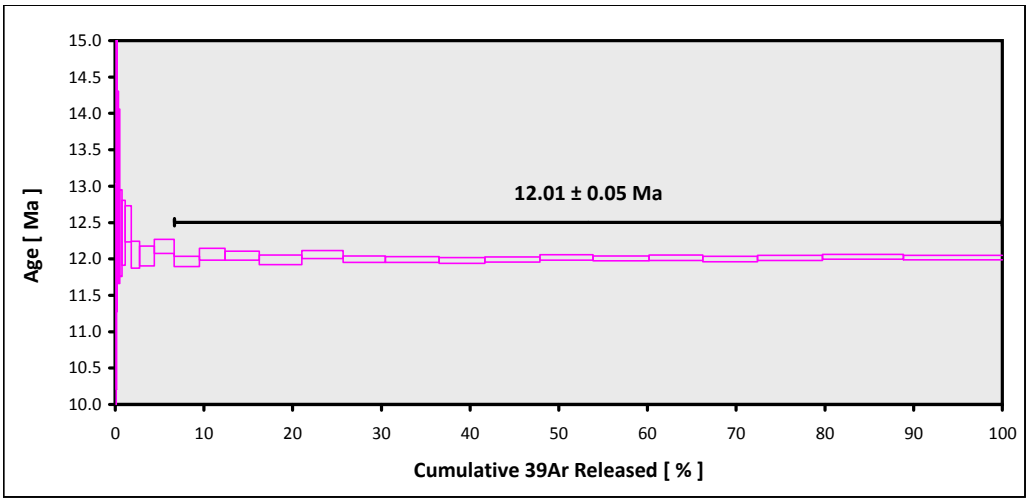
EXP#15D03885 > MV1203-D48-04 > Biotite > MV1203 (13-INT-04)
WALVIS RIDGE > JAHONT GUYOT
14-OSU-04 (R98) > Incremental Heating > Susan Schnur

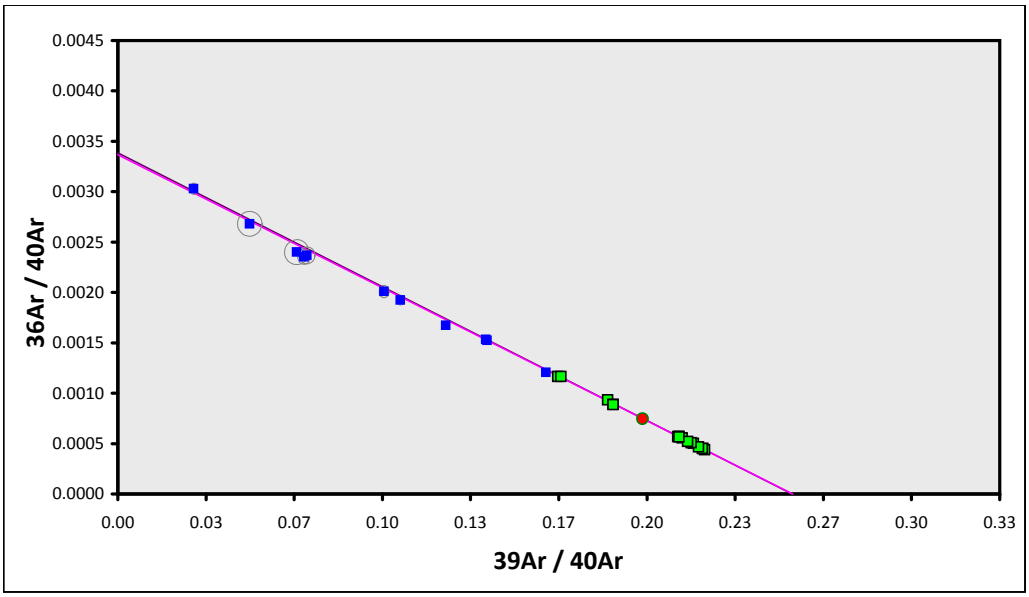
Information on Analysis and Constants Used in Calculations

Project = **MV1203 (13-INT-04)**
Sample = **MV1203-D48-04**
Material = **Biotite**
Location = **Jahont Guyot**
Region = **Walvis Ridge**
Analyst = **Susan Schnur**
Irradiation = **14-OSU-04 (R98)**
Position = **X: 0 | Y: 0 | Z/H: 18.16 mm**
FCT-NM Age = **28.201 ± 0.023 Ma**
FCT-NM Reference = **Kuiper et al (2008)**
FCT-NM 40Ar/39Ar Ratio = **9.25463 ± 0.01916**
FCT-NM J-value = **0.00169833 ± 0.00000352**
Air Shot 40Ar/36Ar = **303.4860 ± 0.5311**
Air Shot MDF = **0.99341294 ± 0.00071807 (LIN)**
Experiment Type = **Incremental Heating**
Extraction Method = **Bulk Laser Heating**
Heating = **77 sec**
Isolation = **6.00 min**
Instrument = **ARGUS-VI-D**
Preferred Age = **Plateau Age**
Age Classification = **Eruption Age**
IGSN = **IESRS0050**
Rock Class = **Igneous>Volcanic>Mafic**
Lithology = **Trachyte**
Lat-Lon = **39°33.1'S - 7°50.0'W**
Age Equations = **Min et al. (2000)**
Negative Intensities = **Allowed**
Collector Calibrations = **40Ar 36Ar**
Decay 40K = **5.530 ± 0.048 E-10 1/a**
Decay 39Ar = **2.940 ± 0.016 E-07 1/h**
Decay 37Ar = **8.230 ± 0.012 E-04 1/h**
Decay 36Cl = **2.257 ± 0.015 E-06 1/a**
Decay 40K(EC,β^+) = **0.580 ± 0.009 E-10 1/a**
Decay 40K(β^-) = **4.950 ± 0.043 E-10 1/a**
Atmospheric 40/36(a) = **295.50**
Atmospheric 38/36(a) = **0.1869**
Production 39/37(ca) = **0.0006756 ± 0.0000089**
Production 38/37(ca) = **0.0000718 ± 0.0000092**
Production 36/37(ca) = **0.0002663 ± 0.0000004**
Production 40/39(k) = **0.003823 ± 0.000102**
Production 38/39(k) = **0.012031 ± 0.000019**
Production 36/38(cl) = **262.80 ± 1.71**
Scaling Ratio K/Ca = **0.430**
Abundance Ratio 40K/K = **1.1700 ± 0.0100 E-04**
Atomic Weight K = **39.0983 ± 0.0001 g**

Low T not great, but enough high-T steps to get Good plateau plateau and MSWD.

Results	40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD	39Ar(k) (%,n)	K/Ca ± 2σ
Age Plateau		3.92373 ± 0.00339	**12.01 ± 0.05**	1.06	93.35	7 ± 9
		± 0.09%	**± 0.42%**	39%	16	
		Full External Error ± 0.28		1.73	2σ Confidence Limit	
		Analytical Error ± 0.01		1.0275	Error Magnification	
Total Fusion Age		3.92855 ± 0.00371	**12.02 ± 0.05**		27	1588 ± 78858
		± 0.09%	**± 0.42%**			
		Full External Error ± 0.28				
		Analytical Error ± 0.01				
Normal Isochron	**297.20 ± 3.05**	3.91893 ± 0.00900	**12.00 ± 0.06**	1.06	93.35	
	± 1.03%	± 0.23%	**± 0.47%**	39%	16	
		Full External Error ± 0.28		1.76	2σ Confidence Limit	
		Analytical Error ± 0.03		1.0290	Error Magnification	
Inverse Isochron	**297.05 ± 3.04**	3.91951 ± 0.00898	**12.00 ± 0.06**	1.05	93.35	
	± 1.02%	± 0.23%	**± 0.47%**	40%	16	
		Full External Error ± 0.28		1.76	2σ Confidence Limit	
		Analytical Error ± 0.03		1.0260	Error Magnification	
				22%	Spreading Factor	





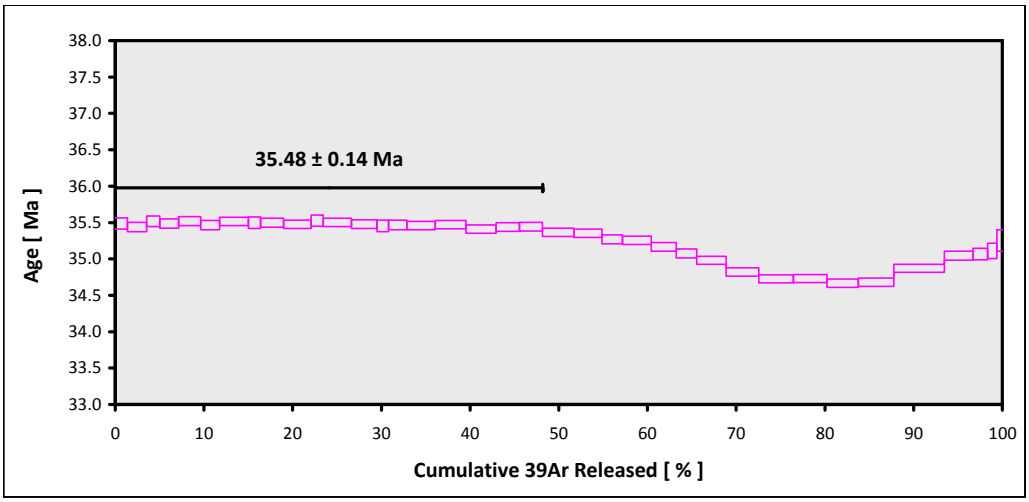
EXP#15D03973 > MV1203-D56-22 > Groundmass > MV1203 (13-INT-04)
WALVIS RIDGE > HARPOONER GUYOT
14-OSU-04 (R98) > Incremental Heating > Susan Schnur

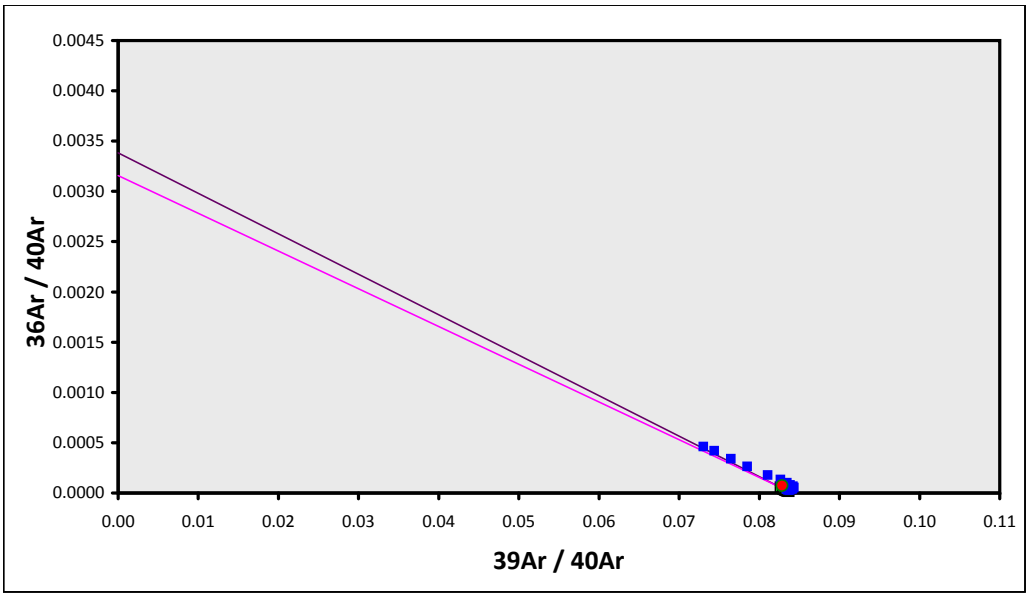
Information on Analysis and Constants Used in Calculations

Project = **MV1203 (13-INT-04)**
Sample = **MV1203-D56-22**
Material = **Groundmass**
Location = **Harpooner Guyot**
Region = **Walvis Ridge**
Analyst = **Susan Schnur**
Irradiation = **14-OSU-04 (R98)**
Position = **X: 0 | Y: 0 | Z/H: 28.57 mm**
FCT-NM Age = **28.201 ± 0.023 Ma**
FCT-NM Reference = **Kuiper et al (2008)**
FCT-NM 40Ar/39Ar Ratio = **9.43817 ± 0.01916**
FCT-NM J-value = **0.00166530 ± 0.00000338**
Air Shot 40Ar/36Ar = **303.4800 ± 0.5281**
Air Shot MDF = **0.99341776 ± 0.00071664 (LIN)**
Experiment Type = **Incremental Heating**
Extraction Method = **Bulk Laser Heating**
Heating = **77 sec**
Isolation = **6.00 min**
Instrument = **ARGUS-VI-D**
Preferred Age = **Plateau Age**
Age Classification = **Eruption Age**
IGSN = **IESRS0051**
Rock Class = **Igneous>Volcanic>Mafic**
Lithology = **Trachyte**
Lat-Lon = **37°18.2'S - 3°49.3'W**
Age Equations = **Min et al. (2000)**
Negative Intensities = **Allowed**
Collector Calibrations = **40Ar 36Ar**
Decay 40K = **5.530 ± 0.048 E-10 1/a**
Decay 39Ar = **2.940 ± 0.016 E-07 1/h**
Decay 37Ar = **8.230 ± 0.012 E-04 1/h**
Decay 36Cl = **2.257 ± 0.015 E-06 1/a**
Decay 40K(EC,β^+) = **0.580 ± 0.009 E-10 1/a**
Decay 40K(β^-) = **4.950 ± 0.043 E-10 1/a**
Atmospheric 40/36(a) = **295.50**
Atmospheric 38/36(a) = **0.1869**
Production 39/37(ca) = **0.0006756 ± 0.0000089**
Production 38/37(ca) = **0.0000718 ± 0.0000092**
Production 36/37(ca) = **0.0002663 ± 0.0000004**
Production 40/39(k) = **0.003823 ± 0.000102**
Production 38/39(k) = **0.012031 ± 0.000019**
Production 36/38(cl) = **262.80 ± 1.71**
Scaling Ratio K/Ca = **0.430**
Abundance Ratio 40K/K = **1.1700 ± 0.0100 E-04**
Atomic Weight K = **39.0983 ± 0.0001 g**

High-T has odd bowl shape, but low T steps may be enough for an age.

Results	40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD	39Ar(k) (%,n)	K/Ca ± 2σ
Age Plateau		11.89680 ± 0.00478 (± 0.04%)	**35.48 ± 0.14 (± 0.40%)**	0.99	48.17	9.50 ± 1.52
			Full External Error ± 0.81	47%	20	
			Analytical Error ± 0.01	1.65	2σ Confidence Limit	
				1.0000	Error Magnification	
Total Fusion Age		11.80988 ± 0.00352 (± 0.03%)	**35.22 ± 0.14 (± 0.40%)**		37	5.98 ± 0.34
			Full External Error ± 0.80			
			Analytical Error ± 0.01			
Normal Isochron	**310.55 ± 48.28 (± 15.55%)**	11.89111 ± 0.01892 (± 0.16%)	**35.46 ± 0.15 (± 0.43%)**	1.00	48.17	
			Full External Error ± 0.81	46%	20	
			Analytical Error ± 0.06	1.67	2σ Confidence Limit	
				1.0000	Error Magnification	
Inverse Isochron	**316.77 ± 46.23 (± 14.59%)**	11.88875 ± 0.01894 (± 0.16%)	**35.45 ± 0.15 (± 0.43%)**	1.00	48.17	
Clustered Points			Full External Error ± 0.81	46%	20	
			Analytical Error ± 0.06	1.67	2σ Confidence Limit	
				1.0000	Error Magnification	
				1%	Spreading Factor	





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

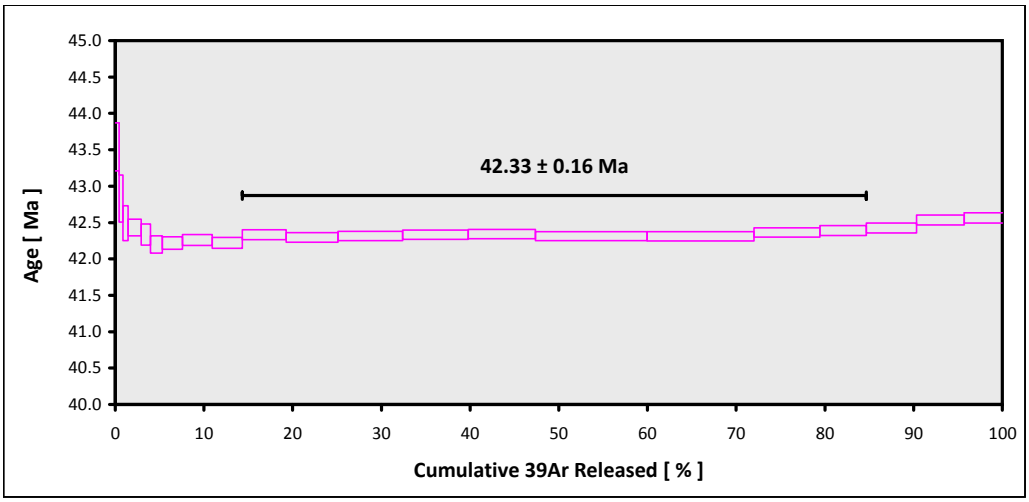
EXP#15D04024 > MV1203-D61-07C > Alkali-Feldspar > MV1203 (13-INT-04)
WALVIS RIDGE > MAYBE GUYOT
14-OSU-04 (R98) > Incremental Heating > Susan Schnur

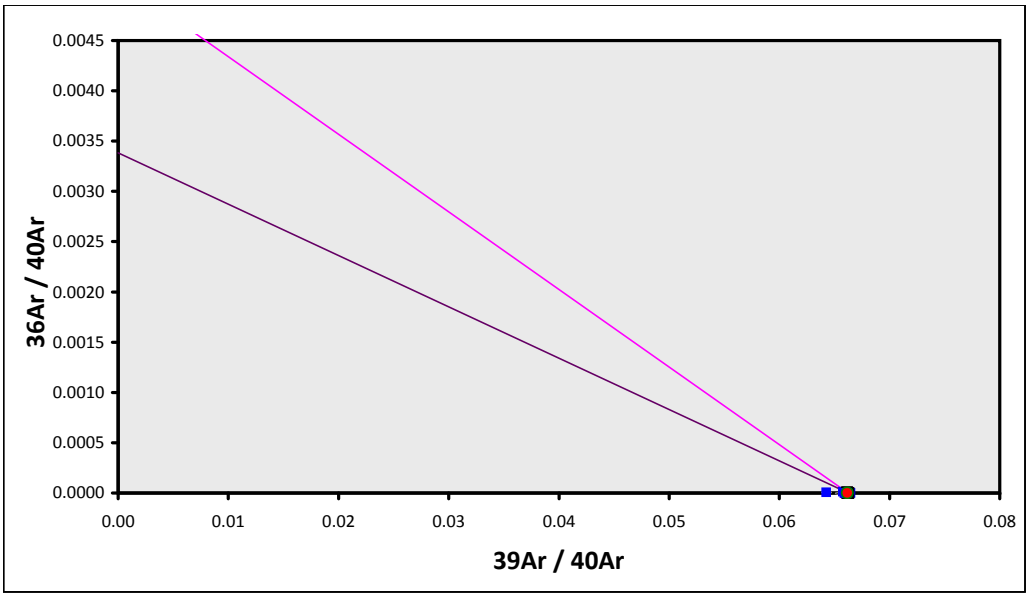
Information on Analysis and Constants Used in Calculations

Project = **MV1203 (13-INT-04)**
Sample = **MV1203-D61-07C**
Material = **Alkali-Feldspar**
Location = **Maybe Guyot**
Region = **Walvis Ridge**
Analyst = **Susan Schnur**
Irradiation = **14-OSU-04 (R98)**
Position = **X: 0 | Y: 0 | Z/H: 50.3 mm**
FCT-NM Age = **28.201 ± 0.023 Ma**
FCT-NM Reference = **Kuiper et al (2008)**
FCT-NM 40Ar/39Ar Ratio = **10.01555 ± 0.01913**
FCT-NM J-value = **0.00156930 ± 0.00000300**
Air Shot 40Ar/36Ar = **303.4750 ± 0.5280**
Air Shot MDF = **0.99342177 ± 0.00071665 (LIN)**
Experiment Type = **Incremental Heating**
Extraction Method = **Bulk Laser Heating**
Heating = **77 sec**
Isolation = **6.00 min**
Instrument = **ARGUS-VI-D**
Preferred Age = **Plateau Age**
Age Classification = **Eruption Age**
IGSN = **IESRS0052**
Rock Class = **Igneous>Volcanic>Mafic**
Lithology = **Trachyte**
Lat-Lon = **37°12.1'S - 1°08.5'W**
Age Equations = **Min et al. (2000)**
Negative Intensities = **Allowed**
Collector Calibrations = **40Ar 36Ar**
Decay 40K = **5.530 ± 0.048 E-10 1/a**
Decay 39Ar = **2.940 ± 0.016 E-07 1/h**
Decay 37Ar = **8.230 ± 0.012 E-04 1/h**
Decay 36Cl = **2.257 ± 0.015 E-06 1/a**
Decay 40K(EC,β^+) = **0.580 ± 0.009 E-10 1/a**
Decay 40K(β^-) = **4.950 ± 0.043 E-10 1/a**
Atmospheric 40/36(a) = **295.50**
Atmospheric 38/36(a) = **0.1869**
Production 39/37(ca) = **0.0006756 ± 0.0000089**
Production 38/37(ca) = **0.0000718 ± 0.0000092**
Production 36/37(ca) = **0.0002663 ± 0.0000004**
Production 40/39(k) = **0.003823 ± 0.000102**
Production 38/39(k) = **0.012031 ± 0.000019**
Production 36/38(cl) = **262.80 ± 1.71**
Scaling Ratio K/Ca = **0.430**
Abundance Ratio 40K/K = **1.1700 ± 0.0100 E-04**
Atomic Weight K = **39.0983 ± 0.0001 g**

Good plateau

Results	40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD	39Ar(k) (%,n)	K/Ca ± 2σ
Age Plateau		15.09334 ± 0.00780	**42.33 ± 0.16**	0.78	70.35	6.5 ± 0.6
		± 0.05%	**± 0.38%**	62%	9	
		Full External Error ± 0.96		2.00	2σ Confidence Limit	
		Analytical Error ± 0.02		1.0000	Error Magnification	
Total Fusion Age		15.10164 ± 0.00641	**42.36 ± 0.16**		21	6.9 ± 0.7
		± 0.04%	**± 0.38%**			
		Full External Error ± 0.96				
		Analytical Error ± 0.02				
Normal Isochron	68.04 **± 356.32**	15.11305 ± 0.01702	**42.39 ± 0.17**	1.42	70.35	
	########	± 0.11%	**± 0.39%**	19%	9	
		Full External Error ± 0.97		2.07	2σ Confidence Limit	
		Analytical Error ± 0.05		1.1924	Error Magnification	
Inverse Isochron	**195.61 ± 140.36**	15.09619 ± 0.01074	**42.34 ± 0.16**	0.81	70.35	
Clustered Points	**± 71.75%**	± 0.07%	**± 0.38%**	58%	9	
		Full External Error ± 0.96		2.07	2σ Confidence Limit	
		Analytical Error ± 0.03		1.0000	Error Magnification	
				0%	Spreading Factor	





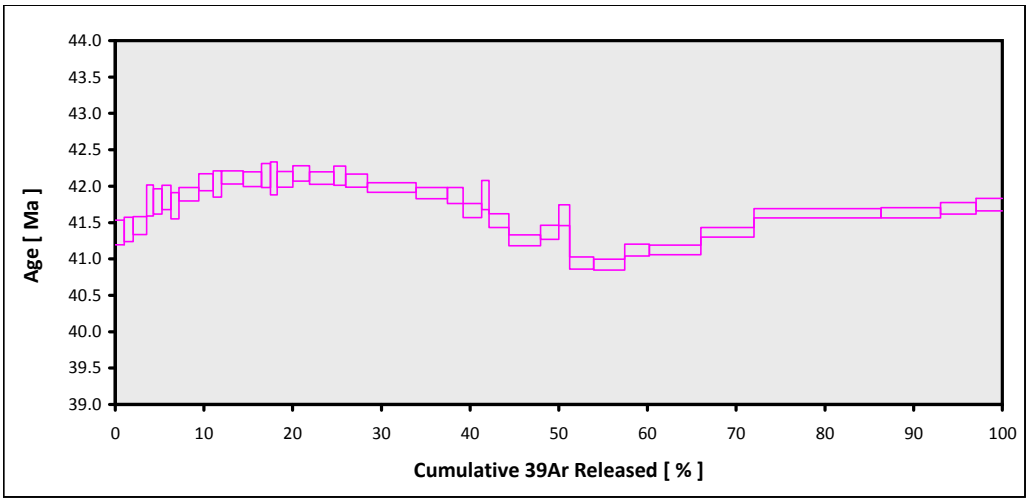
EXP#15D04054 > MV1203-D62-01 > Groundmass > MV1203 (13-INT-04)
WALVIS RIDGE > MAYBE GUYOT
14-OSU-04 (R98) > Incremental Heating > Susan Schnur

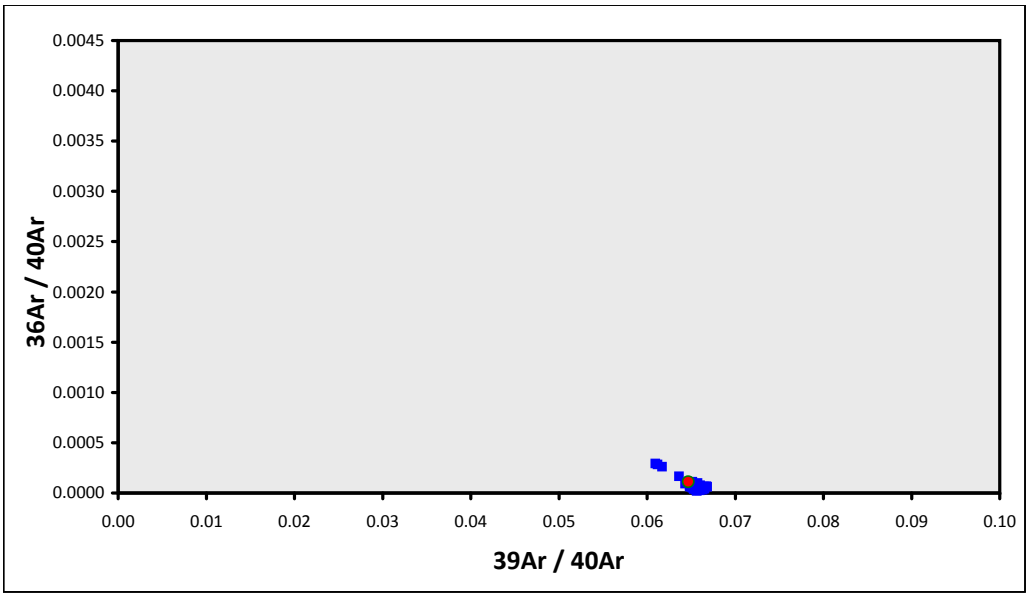
Information on Analysis and Constants Used in Calculations

Project = **MV1203 (13-INT-04)**
Sample = **MV1203-D62-01**
Material = **Groundmass**
Location = **Maybe Guyot**
Region = **Walvis Ridge**
Analyst = **Susan Schnur**
Irradiation = **14-OSU-04 (R98)**
Position = **X: 0 | Y: 0 | Z/H: 52.46 mm**
FCT-NM Age = **28.201 ± 0.023 Ma**
FCT-NM Reference = **Kuiper et al (2008)**
FCT-NM 40Ar/39Ar Ratio = **10.08730 ± 0.01917**
FCT-NM J-value = **0.00155814 ± 0.00000296**
Air Shot 40Ar/36Ar = **303.4710 ± 0.5280**
Air Shot MDF = **0.99342499 ± 0.00071666 (LIN)**
Experiment Type = **Incremental Heating**
Extraction Method = **Bulk Laser Heating**
Heating = **77 sec**
Isolation = **6.00 min**
Instrument = **ARGUS-VI-D**
Preferred Age = Undefined
Age Classification = Undefined
IGSN = **IESRS0053**
Rock Class = **Igneous>Volcanic>Mafic**
Lithology = **Trachyte**
Lat-Lon = **37°14.8'S - 1°09.6'W**
Age Equations = **Min et al. (2000)**
Negative Intensities = **Allowed**
Collector Calibrations = **40Ar 36Ar**
Decay 40K = **5.530 ± 0.048 E-10 1/a**
Decay 39Ar = **2.940 ± 0.016 E-07 1/h**
Decay 37Ar = **8.230 ± 0.012 E-04 1/h**
Decay 36Cl = **2.257 ± 0.015 E-06 1/a**
Decay 40K(EC,β^+) = **0.580 ± 0.009 E-10 1/a**
Decay 40K(β^-) = **4.950 ± 0.043 E-10 1/a**
Atmospheric 40/36(a) = **295.50**
Atmospheric 38/36(a) = **0.1869**
Production 39/37(ca) = **0.0006756 ± 0.0000089**
Production 38/37(ca) = **0.0000718 ± 0.0000092**
Production 36/37(ca) = **0.0002663 ± 0.0000004**
Production 40/39(k) = **0.003823 ± 0.000102**
Production 38/39(k) = **0.012031 ± 0.000019**
Production 36/38(cl) = **262.80 ± 1.71**
Scaling Ratio K/Ca = **0.430**
Abundance Ratio 40K/K = **1.1700 ± 0.0100 E-04**
Atomic Weight K = **39.0983 ± 0.0001 g**

Strange things going on at high-T, plateau very poor.

Results	40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD	39Ar(k) (%,n)	K/Ca ± 2σ
Age Plateau						
Cannot Calculate						
Total Fusion Age		14.95082 ± 0.00612 ± 0.04%	**41.64 ± 0.16 ± 0.38%**		37	5.05 ± 0.25
			Full External Error ± 0.95			
			Analytical Error ± 0.02			
Normal Isochron						
Cannot Calculate						
Inverse Isochron						
Cannot Calculate						





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

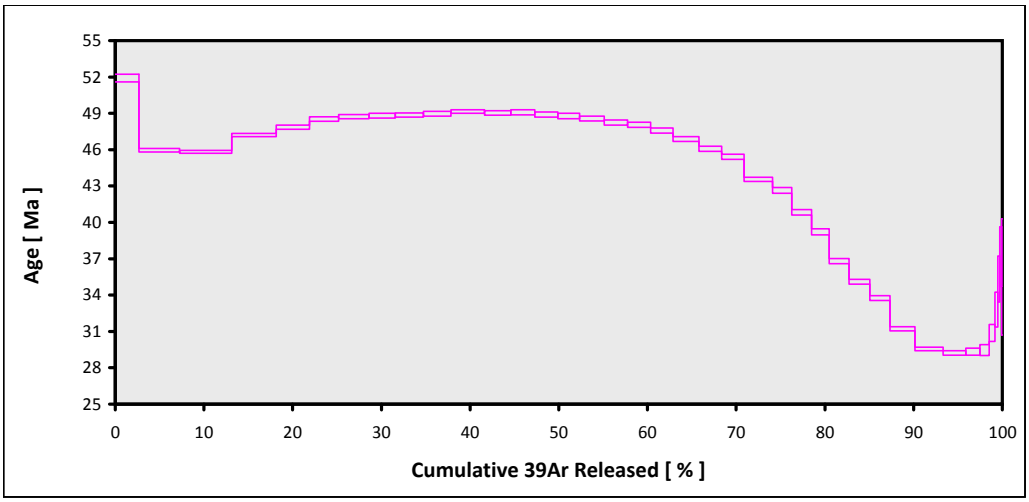
EXP#16D02823 > MV1203-D02-01 > Groundmass > MV1203 (13-INT-04)
WALVIS RIDGE > ISHMAEL GUYOT
15-OSU-07 (7A2-15) > Incremental Heating > Susan Schnur

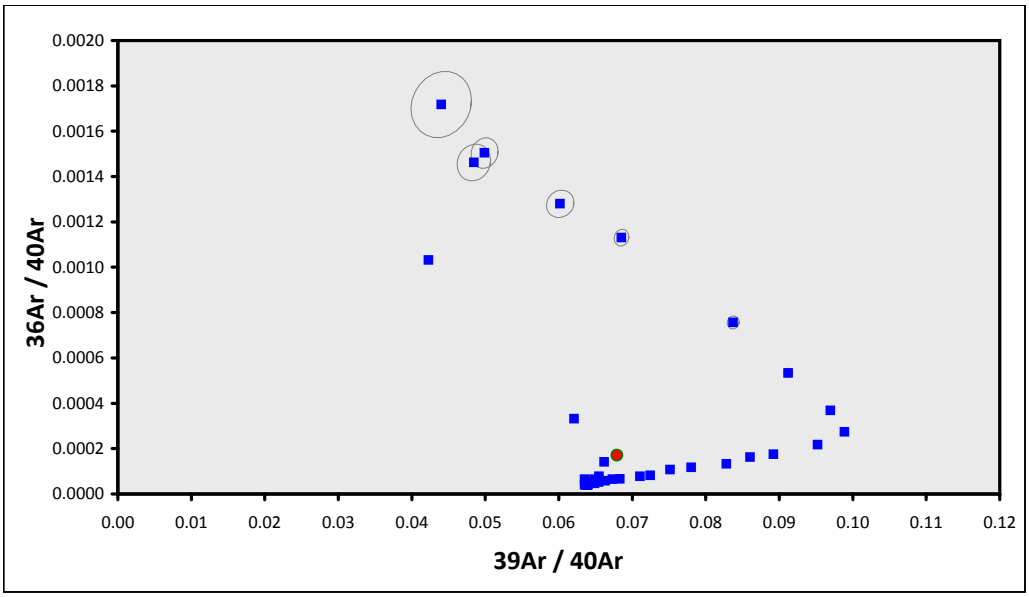
Information on Analysis and Constants Used in Calculations

Project = **MV1203 (13-INT-04)**
Sample = **MV1203-D02-01**
Material = **Groundmass**
Location = **Ishmael Guyot**
Region = **Walvis Ridge**
Analyst = **Susan Schnur**
Irradiation = **15-OSU-07 (7A2-15)**
Position = **X: 0 | Y: 0 | Z/H: 4.38 mm**
FCT-NM Age = **28.201 ± 0.023 Ma**
FCT-NM Reference = **Kuiper et al (2008)**
FCT-NM 40Ar/39Ar Ratio = **8.87021 ± 0.01419**
FCT-NM J-value = **0.00177193 ± 0.00000284**
Air Shot 40Ar/36Ar = **303.9280 ± 0.6261**
Air Shot MDF = **0.99305848 ± 0.00076425 (LIN)**
Experiment Type = **Incremental Heating**
Extraction Method = **Bulk Laser Heating**
Heating = **77 sec**
Isolation = **3.00 min**
Instrument = **ARGUS-VI-D**
Preferred Age = Undefined
Age Classification = Undefined
IGSN = **IESRS0054**
Rock Class = **Igneous>Volcanic>Mafic**
Lithology = **Basaltic-Trachyandesite**
Lat-Lon = **34°36.2'S - 0°55.4'W**
Age Equations = **Min et al. (2000)**
Negative Intensities = **Allowed**
Collector Calibrations = **36Ar**
Decay 40K = **5.530 ± 0.048 E-10 1/a**
Decay 39Ar = **2.940 ± 0.016 E-07 1/h**
Decay 37Ar = **8.230 ± 0.012 E-04 1/h**
Decay 36Cl = **2.257 ± 0.015 E-06 1/a**
Decay 40K(EC,β^+) = **0.580 ± 0.009 E-10 1/a**
Decay 40K(β^-) = **4.950 ± 0.043 E-10 1/a**
Atmospheric 40/36(a) = **295.50**
Atmospheric 38/36(a) = **0.1869**
Production 39/37(ca) = **0.0006756 ± 0.0000089**
Production 38/37(ca) = **0.0000718 ± 0.0000092**
Production 36/37(ca) = **0.0002663 ± 0.0000004**
Production 40/39(k) = **0.003823 ± 0.000102**
Production 38/39(k) = **0.012031 ± 0.000019**
Production 36/38(cl) = **262.80 ± 1.71**
Scaling Ratio K/Ca = **0.430**
Abundance Ratio 40K/K = **1.1700 ± 0.0100 E-04**
Atomic Weight K = **39.0983 ± 0.0001 g**

Very minimal plateau that likely reflects the correct age, if not for excess argon.

Results	40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD	39Ar(k) (%,n)	K/Ca ± 2σ
Age Plateau						
Cannot Calculate						
Total Fusion Age		13.98444 ± 0.01101 ± 0.08%	**44.26 ± 0.14 ± 0.33%**		39	0.103 ± 0.000
			Full External Error ± 1.00			
			Analytical Error ± 0.03			
Normal Isochron						
Cannot Calculate						
Inverse Isochron						
Cannot Calculate						





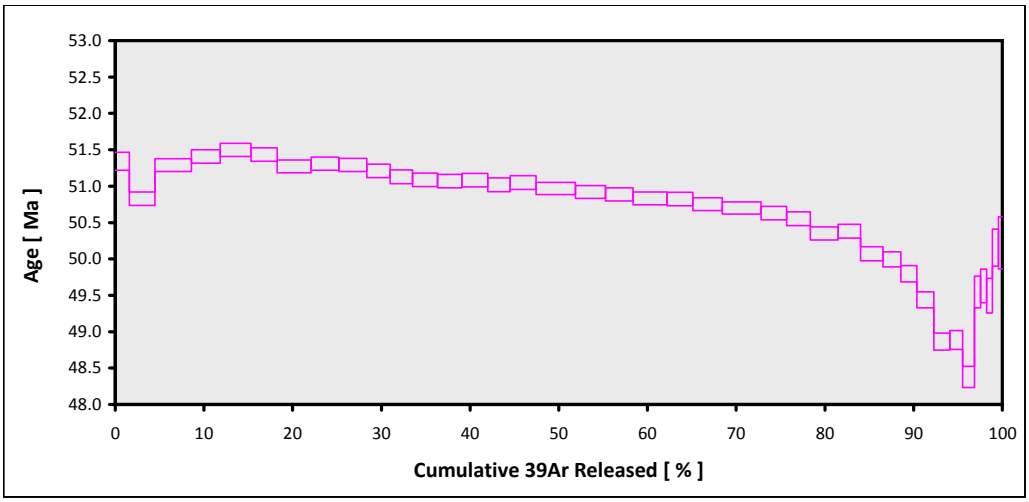
EXP#16D02932 > MV1203-D02-08 > Groundmass > MV1203 (13-INT-04)
WALVIS RIDGE > ISHMAEL GUYOT
15-OSU-07 (7A3-15) > Incremental Heating > Susan Schnur

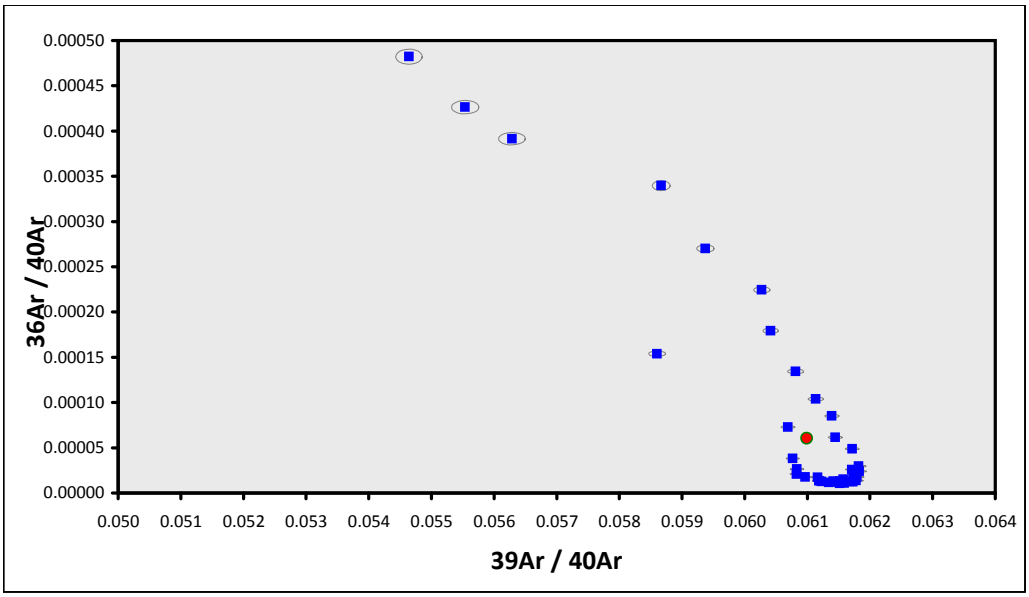
Information on Analysis and Constants Used in Calculations

Project = **MV1203 (13-INT-04)**
Sample = **MV1203-D02-08**
Material = **Groundmass**
Location = **Ishmael Guyot**
Region = **Walvis Ridge**
Analyst = **Susan Schnur**
Irradiation = **15-OSU-07 (7A3-15)**
Position = **X: 0 | Y: 0 | Z/H: 6.65 mm**
FCT-NM Age = **28.201 ± 0.023 Ma**
FCT-NM Reference = **Kuiper et al (2008)**
FCT-NM 40Ar/39Ar Ratio = **8.88929 ± 0.01422**
FCT-NM J-value = **0.00176813 ± 0.00000283**
Air Shot 40Ar/36Ar = **303.8640 ± 0.6229**
Air Shot MDF = **0.99310974 ± 0.00076282 (LIN)**
Experiment Type = **Incremental Heating**
Extraction Method = **Bulk Laser Heating**
Heating = **77 sec**
Isolation = **3.00 min**
Instrument = **ARGUS-VI-D**
Preferred Age = Undefined
Age Classification = Undefined
IGSN = **IESRS055**
Rock Class = **Igneous>Volcanic>Mafic**
Lithology = **Basaltic trachyandesite**
Lat-Lon = **34°36.2'S - 0°55.4'W**
Age Equations = **Min et al. (2000)**
Negative Intensities = **Allowed**
Collector Calibrations = **36Ar**
Decay 40K = **5.530 ± 0.048 E-10 1/a**
Decay 39Ar = **2.940 ± 0.016 E-07 1/h**
Decay 37Ar = **8.230 ± 0.012 E-04 1/h**
Decay 36Cl = **2.257 ± 0.015 E-06 1/a**
Decay 40K(EC,β^+) = **0.580 ± 0.009 E-10 1/a**
Decay 40K(β^-) = **4.950 ± 0.043 E-10 1/a**
Atmospheric 40/36(a) = **295.50**
Atmospheric 38/36(a) = **0.1869**
Production 39/37(ca) = **0.0006756 ± 0.0000089**
Production 38/37(ca) = **0.0000718 ± 0.0000092**
Production 36/37(ca) = **0.0002663 ± 0.0000004**
Production 40/39(k) = **0.003823 ± 0.000102**
Production 38/39(k) = **0.012031 ± 0.000019**
Production 36/38(cl) = **262.80 ± 1.71**
Scaling Ratio K/Ca = **0.430**
Abundance Ratio 40K/K = **1.1700 ± 0.0100 E-04**
Atomic Weight K = **39.0983 ± 0.0001 g**

Downward slanting, possible a very minimal plateau at low-T, but inconclusive.

Results	40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD	39Ar(k) (%,n)	K/Ca ± 2σ
Age Plateau Cannot Calculate						
Total Fusion Age		16.10246 ± 0.00521 ± 0.03%	**50.77 ± 0.16 ± 0.32%**		39	0.438 ± 0.000
			Full External Error ± 1.15			
			Analytical Error ± 0.02			
Normal Isochron Cannot Calculate						
Inverse Isochron Cannot Calculate						





EXP#16D02996 > MV1203-D05-05 > Groundmass > MV1203 (13-INT-04)
WALVIS RIDGE > FEDALLAH GUYOT
15-OSU-07 (7A7-15) > Incremental Heating > Susan Schnur

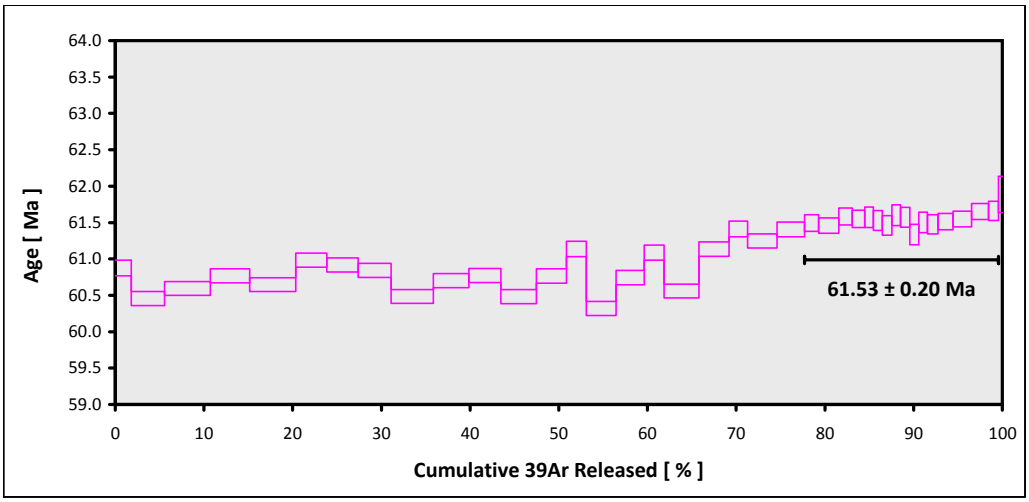
Information on Analysis and Constants Used in Calculations

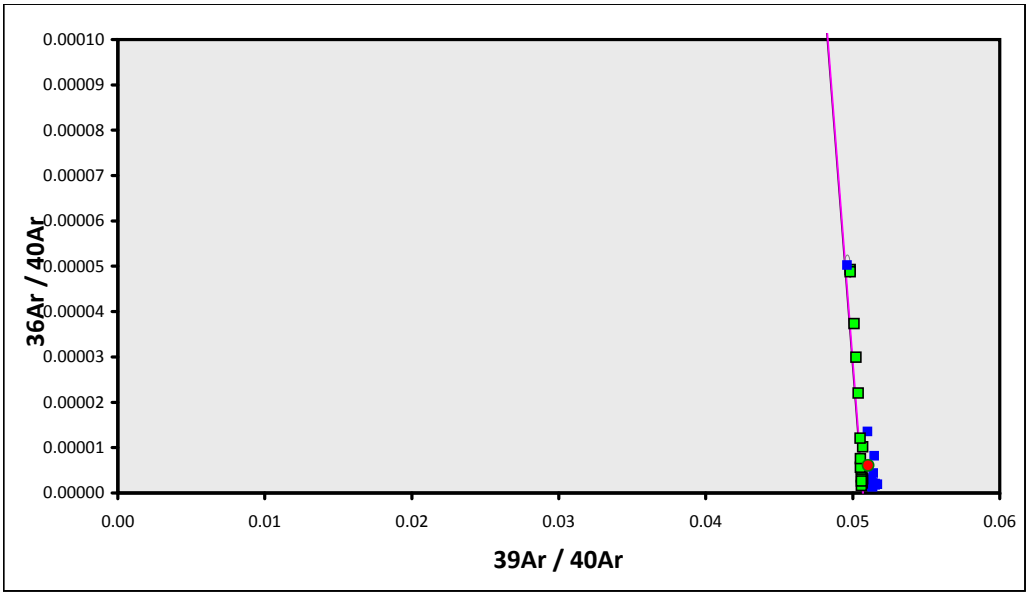
Project = **MV1203 (13-INT-04)**
Sample = **MV1203-D05-05**
Material = **Groundmass**
Location = **Fedallah Guyot**
Region = **Walvis Ridge**
Analyst = **Susan Schnur**
Irradiation = **15-OSU-07 (7A7-15)**
Position = **X: 0 | Y: 0 | Z/H: 13.5 mm**
FCT-NM Age = **28.201 ± 0.023 Ma**
FCT-NM Reference = **Kuiper et al (2008)**
FCT-NM 40Ar/39Ar Ratio = **8.96245 ± 0.01425**
FCT-NM J-value = **0.00175369 ± 0.00000279**
Air Shot 40Ar/36Ar = **303.8280 ± 0.6228**
Air Shot MDF = **0.99313858 ± 0.00076291 (LIN)**
Experiment Type = **Incremental Heating**
Extraction Method = **Bulk Laser Heating**
Heating = **77 sec**
Isolation = **3.00 min**
Instrument = **ARGUS-VI-D**
Preferred Age = **Plateau Age**
Age Classification = **Eruption Age**
IGSN = **IESRS0056**
Rock Class = **Igneous>Volcanic>Mafic**
Lithology = **Trachyte**
Lat-Lon = **33°04.3'S - 0°06.7'W**
Age Equations = **Min et al. (2000)**
Negative Intensities = **Allowed**
Collector Calibrations = **36Ar**
Decay 40K = **5.530 ± 0.048 E-10 1/a**
Decay 39Ar = **2.940 ± 0.016 E-07 1/h**
Decay 37Ar = **8.230 ± 0.012 E-04 1/h**
Decay 36Cl = **2.257 ± 0.015 E-06 1/a**
Decay 40K(EC,β^+) = **0.580 ± 0.009 E-10 1/a**
Decay 40K(β^-) = **4.950 ± 0.043 E-10 1/a**
Atmospheric 40/36(a) = **295.50**
Atmospheric 38/36(a) = **0.1869**
Production 39/37(ca) = **0.0006756 ± 0.0000089**
Production 38/37(ca) = **0.0000718 ± 0.0000092**
Production 36/37(ca) = **0.0002663 ± 0.0000004**
Production 40/39(k) = **0.003823 ± 0.000102**
Production 38/39(k) = **0.012031 ± 0.000019**
Production 36/38(cl) = **262.80 ± 1.71**
Scaling Ratio K/Ca = **0.430**
Abundance Ratio 40K/K = **1.1700 ± 0.0100 E-04**
Atomic Weight K = **39.0983 ± 0.0001 g**

Plateau is very bumpy, likely full of melt inclusions, minimal high-T plateau. 40/36 Good plateau.

Results

Results	40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD	39Ar(k) (%,n)	K/Ca ± 2σ
Age Plateau		19.73736 ± 0.01271 ± 0.06%	**61.53 ± 0.20 ± 0.32%**	1.59 7%	21.86 16	11.9 ± 1.1
			Full External Error ± 1.39	1.73	2σ Confidence Limit	
			Analytical Error ± 0.04	1.2594	Error Magnification	
Total Fusion Age		19.54921 ± 0.00585 ± 0.03%	**60.96 ± 0.19 ± 0.31%**		39	13.7 ± 0.1
			Full External Error ± 1.38			
			Analytical Error ± 0.02			
Normal Isochron Error Chron	**303.00 ± 40.16 ± 13.25%**	19.74451 ± 0.01891 ± 0.10%	**61.55 ± 0.20 ± 0.33%**	1.81 3%	21.86 16	
			Full External Error ± 1.39	1.76	2σ Confidence Limit	
			Analytical Error ± 0.06	1.3468	Error Magnification	
Inverse Isochron Clustered Points	**330.70 ± 33.35 ± 10.08%**	19.72591 ± 0.01598 ± 0.08%	**61.50 ± 0.20 ± 0.32%**	1.30 20%	21.86 16	
			Full External Error ± 1.39	1.76	2σ Confidence Limit	
			Analytical Error ± 0.05	1.1387	Error Magnification	
				2%	Spreading Factor	





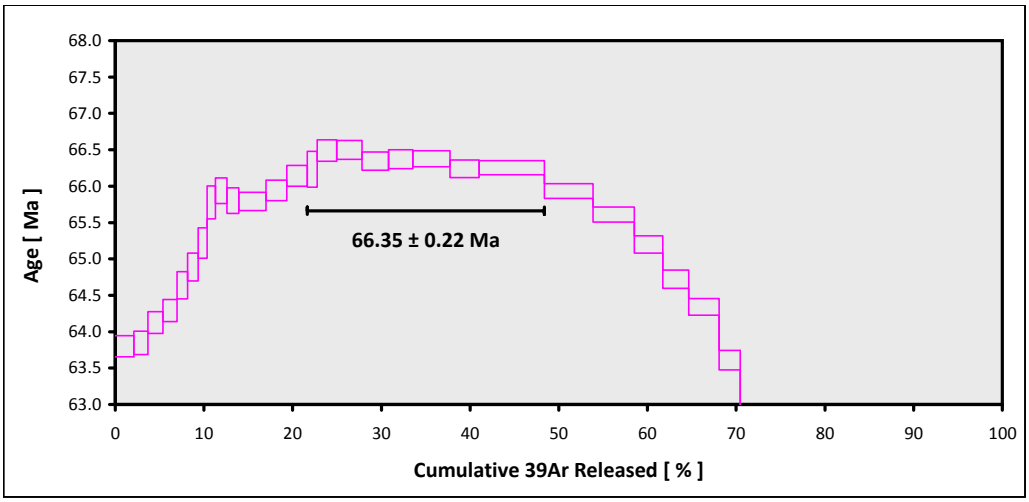
EXP#16D05392 > MV1203-D08-05 > Groundmass > MV1203 (13-INT-04)
WALVIS RIDGE > BELUGA SEAMOUNT
15-OSU-07 (7A12-15) > Incremental Heating > Susan Schnur

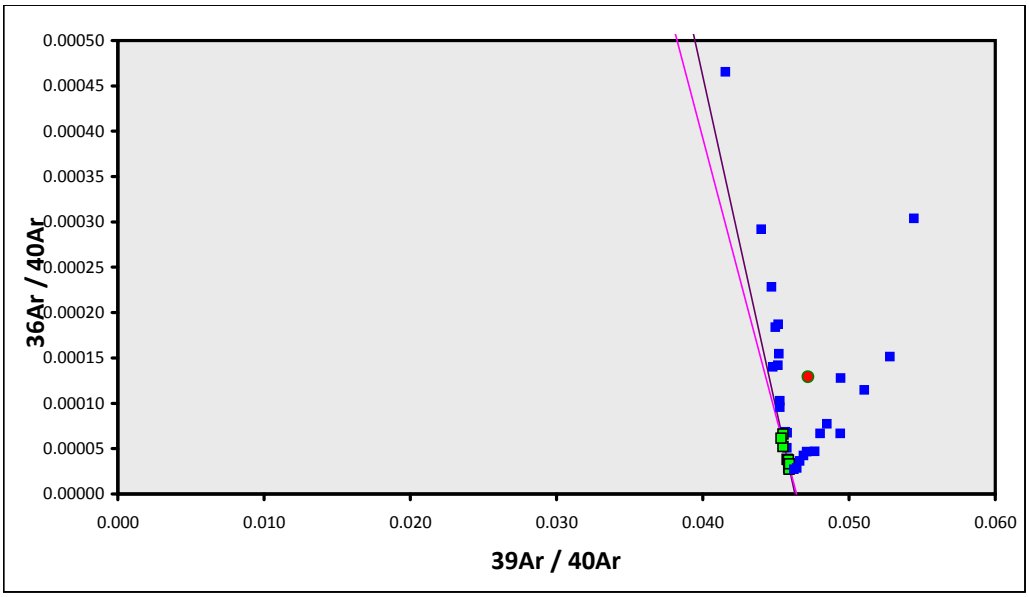
Information on Analysis and Constants Used in Calculations

Project = **MV1203 (13-INT-04)**
Sample = **MV1203-D08-05**
Material = **Groundmass**
Location = **Beluga Seamount**
Region = **Walvis Ridge**
Analyst = **Susan Schnur**
Irradiation = **15-OSU-07 (7A12-15)**
Position = **X: 0 | Y: 0 | Z/H: 21.79 mm**
FCT-NM Age = **28.201 ± 0.023 Ma**
FCT-NM Reference = **Kuiper et al (2008)**
FCT-NM 40Ar/39Ar Ratio = **9.08239 ± 0.01426**
FCT-NM J-value = **0.00173053 ± 0.00000272**
Air Shot 40Ar/36Ar = **304.4160 ± 0.4414**
Air Shot MDF = **0.99266832 ± 0.00067512 (LIN)**
Experiment Type = **Incremental Heating**
Extraction Method = **Bulk Laser Heating**
Heating = **77 sec**
Isolation = **3.00 min**
Instrument = **ARGUS-VI-D**
Preferred Age = **Plateau Age**
Age Classification = **Eruption Age**
IGSN = **IESRS0057**
Rock Class = **Igneous>Volcanic>Mafic**
Lithology = **Trachybasalt**
Lat-Lon = **31°52.8'S - 0°27.4'E**
Age Equations = **Min et al. (2000)**
Negative Intensities = **Allowed**
Collector Calibrations = **36Ar**
Decay 40K = **5.530 ± 0.048 E-10 1/a**
Decay 39Ar = **2.940 ± 0.016 E-07 1/h**
Decay 37Ar = **8.230 ± 0.012 E-04 1/h**
Decay 36Cl = **2.257 ± 0.015 E-06 1/a**
Decay 40K(EC,β^+) = **0.580 ± 0.009 E-10 1/a**
Decay 40K(β^-) = **4.950 ± 0.043 E-10 1/a**
Atmospheric 40/36(a) = **295.50**
Atmospheric 38/36(a) = **0.1869**
Production 39/37(ca) = **0.0006756 ± 0.0000089**
Production 38/37(ca) = **0.0000718 ± 0.0000092**
Production 36/37(ca) = **0.0002663 ± 0.0000004**
Production 40/39(k) = **0.003823 ± 0.000102**
Production 38/39(k) = **0.012031 ± 0.000019**
Production 36/38(cl) = **262.80 ± 1.71**
Scaling Ratio K/Ca = **0.430**
Abundance Ratio 40K/K = **1.1700 ± 0.0100 E-04**
Atomic Weight K = **39.0983 ± 0.0001 g**

Excess argon signature, tiny plateau at low-T and and another slightly higher. Broader plateau selected.

Results	40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD	39Ar(k) (%,n)	K/Ca ± 2σ
Age Plateau		21.59528 ± 0.02338	**66.35 ± 0.22**	2.50	26.73	0.425 ± 0.030
Error Mean		± 0.11%	**± 0.33%**	1%	8	
			Full External Error ± 1.50	2.07	2σ Confidence Limit	
			Analytical Error ± 0.07	1.5817	Error Magnification	
Total Fusion Age		20.37786 ± 0.00715	**62.67 ± 0.19**		37	0.370 ± 0.000
		± 0.04%	**± 0.31%**			
			Full External Error ± 1.42			
			Analytical Error ± 0.02			
Normal Isochron	**314.11 ± 89.75**	21.58205 ± 0.08030	**66.31 ± 0.32**	2.57	26.73	
Error Chron	**± 28.57%**	± 0.37%	**± 0.48%**	2%	8	
			Full External Error ± 1.52	2.15	2σ Confidence Limit	
			Analytical Error ± 0.24	1.6034	Error Magnification	
Inverse Isochron	**352.01 ± 80.91**	21.54702 ± 0.07517	**66.20 ± 0.31**	2.24	26.73	
Error Chron	**± 22.98%**	± 0.35%	**± 0.46%**	4%	8	
			Full External Error ± 1.51	2.15	2σ Confidence Limit	
			Analytical Error ± 0.23	1.4969	Error Magnification	
				1%	Spreading Factor	





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

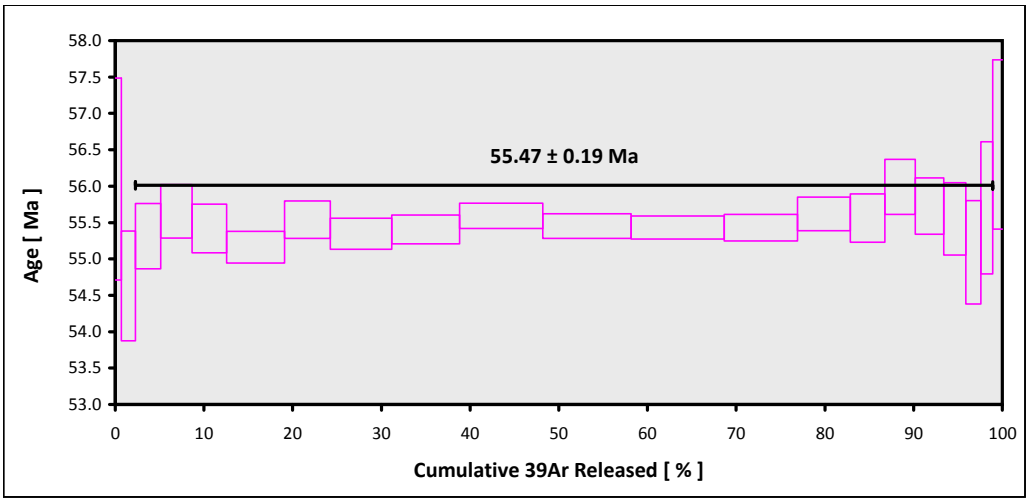
EXP#16D05449 > MV1203-D04-06 > Plagioclase > MV1203 (13-INT-04)
WALVIS RIDGE > QUEEQUEG GUYOT
15-OSU-07 (7A4-15) > Incremental Heating > Susan Schnur

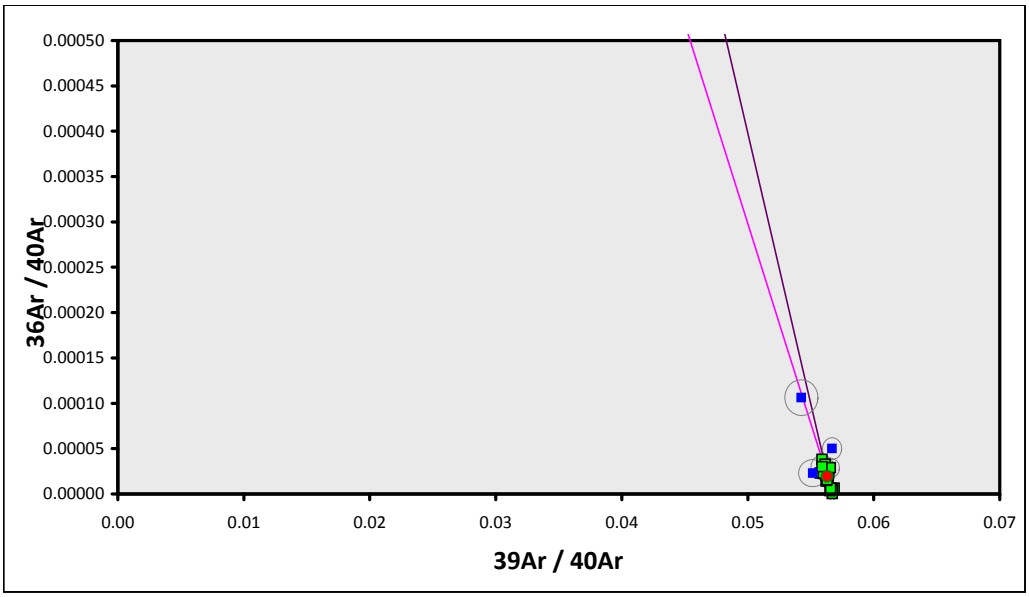
Information on Analysis and Constants Used in Calculations

Project = **MV1203 (13-INT-04)**
Sample = **MV1203-D04-06**
Material = **Plagioclase**
Location = **Queequeg Guyot**
Region = **Walvis Ridge**
Analyst = **Susan Schnur**
Irradiation = **15-OSU-07 (7A4-15)**
Position = **X: 0 | Y: 0 | Z/H: 8.37 mm**
FCT-NM Age = **28.201 ± 0.023 Ma**
FCT-NM Reference = **Kuiper et al (2008)**
FCT-NM 40Ar/39Ar Ratio = **8.90545 ± 0.01425**
FCT-NM J-value = **0.00176492 ± 0.00000282**
Air Shot 40Ar/36Ar = **304.3990 ± 0.4109**
Air Shot MDF = **0.99268189 ± 0.00066280 (LIN)**
Experiment Type = **Incremental Heating**
Extraction Method = **Bulk Laser Heating**
Heating = **77 sec**
Isolation = **3.00 min**
Instrument = **ARGUS-VI-D**
Preferred Age = **Plateau Age**
Age Classification = Undefined
IGSN = **IESRS0058**
Rock Class = **Igneous>Volcanic>Mafic**
Lithology = **Trachybasalt**
Lat-Lon = **33°29.1'S - 0°32.1'W**
Age Equations = **Min et al. (2000)**
Negative Intensities = **Allowed**
Collector Calibrations = **36Ar**
Decay 40K = **5.530 ± 0.048 E-10 1/a**
Decay 39Ar = **2.940 ± 0.016 E-07 1/h**
Decay 37Ar = **8.230 ± 0.012 E-04 1/h**
Decay 36Cl = **2.257 ± 0.015 E-06 1/a**
Decay 40K(EC,β^+) = **0.580 ± 0.009 E-10 1/a**
Decay 40K(β^-) = **4.950 ± 0.043 E-10 1/a**
Atmospheric 40/36(a) = **295.50**
Atmospheric 38/36(a) = **0.1869**
Production 39/37(ca) = **0.0006756 ± 0.0000089**
Production 38/37(ca) = **0.0000718 ± 0.0000092**
Production 36/37(ca) = **0.0002663 ± 0.0000004**
Production 40/39(k) = **0.003823 ± 0.000102**
Production 38/39(k) = **0.012031 ± 0.000019**
Production 36/38(cl) = **262.80 ± 1.71**
Scaling Ratio K/Ca = **0.430**
Abundance Ratio 40K/K = **1.1700 ± 0.0100 E-04**
Atomic Weight K = **39.0983 ± 0.0001 g**

Good plateau

Results	40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD	39Ar(k) (%,n)	K/Ca ± 2σ
Age Plateau		17.64964 ± 0.02383 (± 0.13%)	**55.47 ± 0.19 (± 0.34%)**	1.58	96.66	0.0150 ± 0.0003
			Full External Error ± 1.26	6%	18	
			Analytical Error ± 0.07	1.69	2σ Confidence Limit	
				1.2586	Error Magnification	
Total Fusion Age		17.65370 ± 0.02016 (± 0.11%)	**55.48 ± 0.19 (± 0.33%)**		21	0.0150 ± 0.0000
			Full External Error ± 1.26			
			Analytical Error ± 0.06			
Normal Isochron	**346.86 ± 102.79 (± 29.64%)**	17.63255 ± 0.04076 (± 0.23%)	**55.42 ± 0.22 (± 0.39%)**	1.21	96.66	
			Full External Error ± 1.26	25%	18	
			Analytical Error ± 0.13	1.71	2σ Confidence Limit	
				1.0993	Error Magnification	
Inverse Isochron	**399.60 ± 103.48 (± 25.90%)**	17.61630 ± 0.04398 (± 0.25%)	**55.37 ± 0.22 (± 0.40%)**	1.38	96.66	
Clustered Points			Full External Error ± 1.26	14%	18	
			Analytical Error ± 0.14	1.71	2σ Confidence Limit	
				1.1740	Error Magnification	
				2%	Spreading Factor	





EXP#16D05484 > MV1203-D05-05 > K-Feldspar > MV1203 (13-INT-04)
WALVIS RIDGE > FEDALLAH GUYOT
15-OSU-07 (7A8-15) > Incremental Heating > Susan Schnur

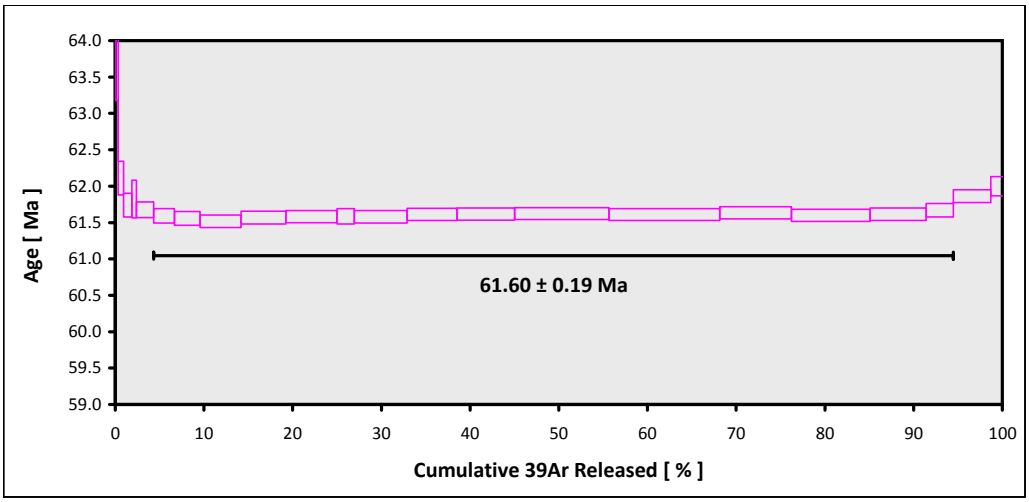
Information on Analysis and Constants Used in Calculations

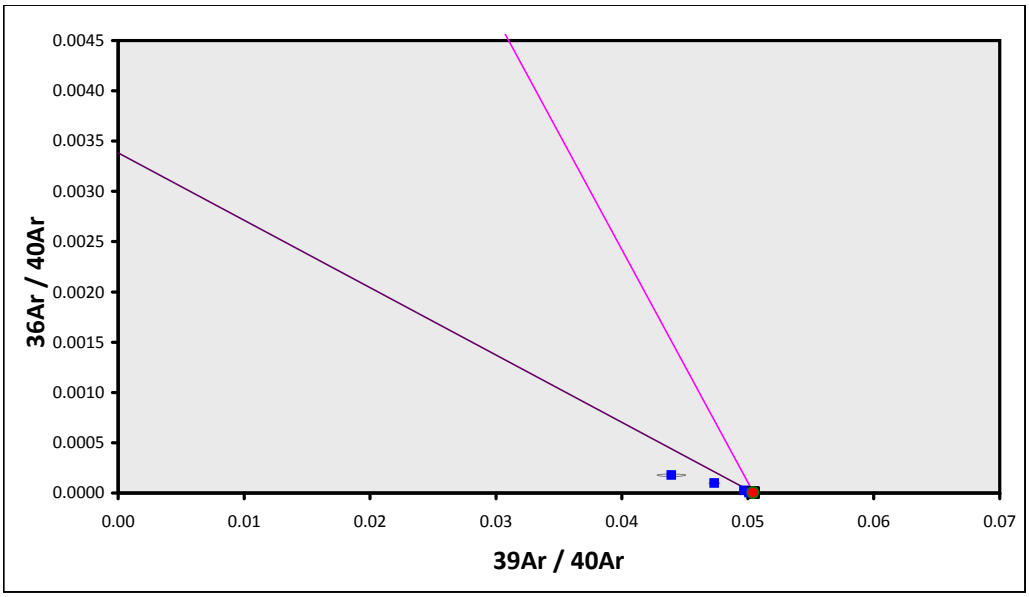
Project = **MV1203 (13-INT-04)**
Sample = **MV1203-D05-05**
Material = **K-Feldspar**
Location = **Fedallah Guyot**
Region = **Walvis Ridge**
Analyst = **Susan Schnur**
Irradiation = **15-OSU-07 (7A8-15)**
Position = **X: 0 | Y: 0 | Z/H: 15.31 mm**
FCT-NM Age = **28.201 ± 0.023 Ma**
FCT-NM Reference = **Kuiper et al (2008)**
FCT-NM 40Ar/39Ar Ratio = **8.98571 ± 0.01420**
FCT-NM J-value = **0.00174915 ± 0.00000276**
Air Shot 40Ar/36Ar = **304.4080 ± 0.4110**
Air Shot MDF = **0.99267471 ± 0.00066278 (LIN)**
Experiment Type = **Incremental Heating**
Extraction Method = **Bulk Laser Heating**
Heating = **77 sec**
Isolation = **1.50 min**
Instrument = **ARGUS-VI-D**
Preferred Age = **Plateau Age**
Age Classification = **Eruption Age**
IGSN = **IESRS0059**
Rock Class = **Igneous>Volcanic>Mafic**
Lithology = **Trachyte**
Lat-Lon = **33°04.3'S - 0°06.7'W**
Age Equations = **Min et al. (2000)**
Negative Intensities = **Allowed**
Collector Calibrations = **36Ar**
Decay 40K = **5.530 ± 0.048 E-10 1/a**
Decay 39Ar = **2.940 ± 0.016 E-07 1/h**
Decay 37Ar = **8.230 ± 0.012 E-04 1/h**
Decay 36Cl = **2.257 ± 0.015 E-06 1/a**
Decay 40K(EC,β^+) = **0.580 ± 0.009 E-10 1/a**
Decay 40K(β^-) = **4.950 ± 0.043 E-10 1/a**
Atmospheric 40/36(a) = **295.50**
Atmospheric 38/36(a) = **0.1869**
Production 39/37(ca) = **0.0006756 ± 0.0000089**
Production 38/37(ca) = **0.0000718 ± 0.0000092**
Production 36/37(ca) = **0.0002663 ± 0.0000004**
Production 40/39(k) = **0.003823 ± 0.000102**
Production 38/39(k) = **0.012031 ± 0.000019**
Production 36/38(cl) = **262.80 ± 1.71**
Scaling Ratio K/Ca = **0.430**
Abundance Ratio 40K/K = **1.1700 ± 0.0100 E-04**
Atomic Weight K = **39.0983 ± 0.0001 g**

Good plateau

Results

Results	40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD	39Ar(k) (%,n)	K/Ca ± 2σ
Age Plateau		19.80995 ± 0.00737	**61.60 ± 0.19**	0.64	90.12	16.4 ± 0.3
		± 0.04%	**± 0.31%**	83%	15	
		Full External Error	± 1.39	1.76	2σ Confidence Limit	
		Analytical Error	± 0.02	1.0000	Error Magnification	
Total Fusion Age		19.82180 ± 0.00733	**61.63 ± 0.19**		23	16.3 ± 0.2
		± 0.04%	**± 0.31%**			
		Full External Error	± 1.39			
		Analytical Error	± 0.02			
Normal Isochron	235.20 **± 398.14**	19.83838 ± 0.02094	**61.69 ± 0.20**	0.83	90.12	
	########	± 0.11%	**± 0.33%**	63%	15	
		Full External Error	± 1.40	1.78	2σ Confidence Limit	
		Analytical Error	± 0.06	1.0000	Error Magnification	
Inverse Isochron	**85.67 ± 60.15**	19.82029 ± 0.02091	**61.63 ± 0.20**	0.61	90.12	
Clustered Points	**± 70.21%**	± 0.11%	**± 0.33%**	85%	15	
		Full External Error	± 1.39	1.78	2σ Confidence Limit	
		Analytical Error	± 0.06	1.0000	Error Magnification	
				0%	Spreading Factor	





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

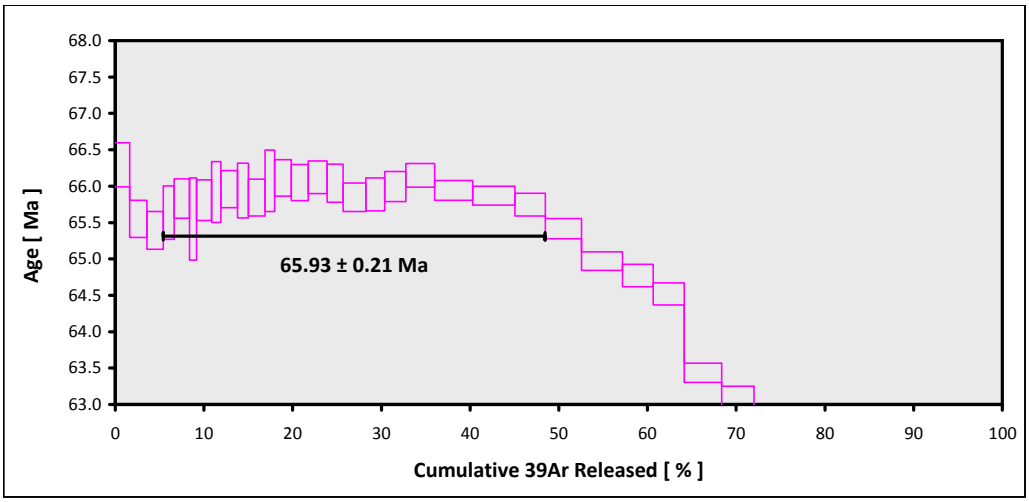
EXP#16D05556 > MV1203-D08-12 > Groundmass > MV1203 (13-INT-04)
WALVIS RIDGE > BELUGA SEAMOUNT
15-OSU-07 (7A14-15) > Incremental Heating > Susan Schnur

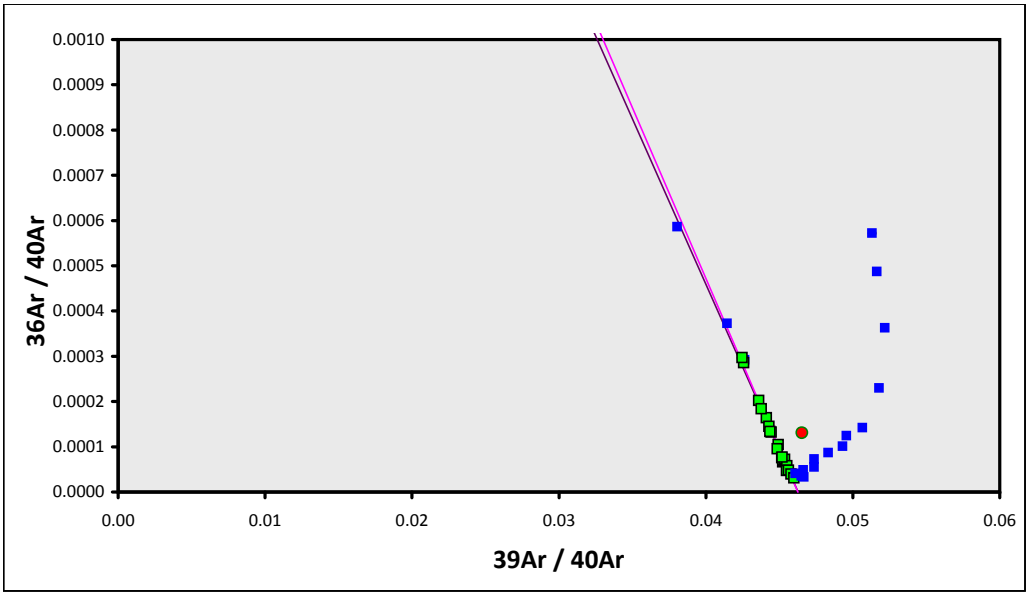
Information on Analysis and Constants Used in Calculations

Project = **MV1203 (13-INT-04)**
Sample = **MV1203-D08-12**
Material = **Groundmass**
Location = **Beluga Seamount**
Region = **Walvis Ridge**
Analyst = **Susan Schnur**
Irradiation = **15-OSU-07 (7A14-15)**
Position = **X: 0 | Y: 0 | Z/H: 25.34 mm**
FCT-NM Age = **28.201 ± 0.023 Ma**
FCT-NM Reference = **Kuiper et al (2008)**
FCT-NM 40Ar/39Ar Ratio = **9.14426 ± 0.01427**
FCT-NM J-value = **0.00171883 ± 0.00000268**
Air Shot 40Ar/36Ar = **304.4110 ± 0.4140**
Air Shot MDF = **0.99267231 ± 0.00066398 (LIN)**
Experiment Type = **Incremental Heating**
Extraction Method = **Bulk Laser Heating**
Heating = **77 sec**
Isolation = **3.00 min**
Instrument = **ARGUS-VI-D**
Preferred Age = **Plateau Age**
Age Classification = **Eruption Age**
IGSN = **IESRS0060**
Rock Class = **Igneous>Volcanic>Mafic**
Lithology = **Basalt**
Lat-Lon = **31°52.8'S - 0°27.4'E**
Age Equations = **Min et al. (2000)**
Negative Intensities = **Allowed**
Collector Calibrations = **36Ar**
Decay 40K = **5.530 ± 0.048 E-10 1/a**
Decay 39Ar = **2.940 ± 0.016 E-07 1/h**
Decay 37Ar = **8.230 ± 0.012 E-04 1/h**
Decay 36Cl = **2.257 ± 0.015 E-06 1/a**
Decay 40K(EC,β^+) = **0.580 ± 0.009 E-10 1/a**
Decay 40K(β^-) = **4.950 ± 0.043 E-10 1/a**
Atmospheric 40/36(a) = **295.50**
Atmospheric 38/36(a) = **0.1869**
Production 39/37(ca) = **0.0006756 ± 0.0000089**
Production 38/37(ca) = **0.0000718 ± 0.0000092**
Production 36/37(ca) = **0.0002663 ± 0.0000004**
Production 40/39(k) = **0.003823 ± 0.000102**
Production 38/39(k) = **0.012031 ± 0.000019**
Production 36/38(cl) = **262.80 ± 1.71**
Scaling Ratio K/Ca = **0.430**
Abundance Ratio 40K/K = **1.1700 ± 0.0100 E-04**
Atomic Weight K = **39.0983 ± 0.0001 g**

Low-T plateau is reasonable, slight recoil or excess argon, but 40/36 is reasonable.

Results	40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD	39Ar(k) (%,n)	K/Ca ± 2σ
Age Plateau		21.60319 ± 0.02006 ± 0.09%	**65.93 ± 0.21 ± 0.32%**	1.50 7%	43.08 20	0.478 ± 0.022
		Full External Error ± 1.49		1.65	2σ Confidence Limit	
		Analytical Error ± 0.06		1.2242	Error Magnification	
Total Fusion Age		20.65018 ± 0.01011 ± 0.05%	**63.07 ± 0.20 ± 0.31%**		37	0.380 ± 0.000
		Full External Error ± 1.42				
		Analytical Error ± 0.03				
Normal Isochron	**298.24 ± 17.06 ± 5.72%**	21.58764 ± 0.03683 ± 0.17%	**65.88 ± 0.23 ± 0.35%**	1.75 3%	43.08 20	
Error Chron		Full External Error ± 1.49		1.67	2σ Confidence Limit	
		Analytical Error ± 0.11		1.3223	Error Magnification	
Inverse Isochron	**286.51 ± 15.58 ± 5.44%**	21.61911 ± 0.03383 ± 0.16%	**65.98 ± 0.23 ± 0.34%**	1.47 9%	43.08 20	
		Full External Error ± 1.49		1.67	2σ Confidence Limit	
		Analytical Error ± 0.10		1.2144	Error Magnification	
				8%	Spreading Factor	





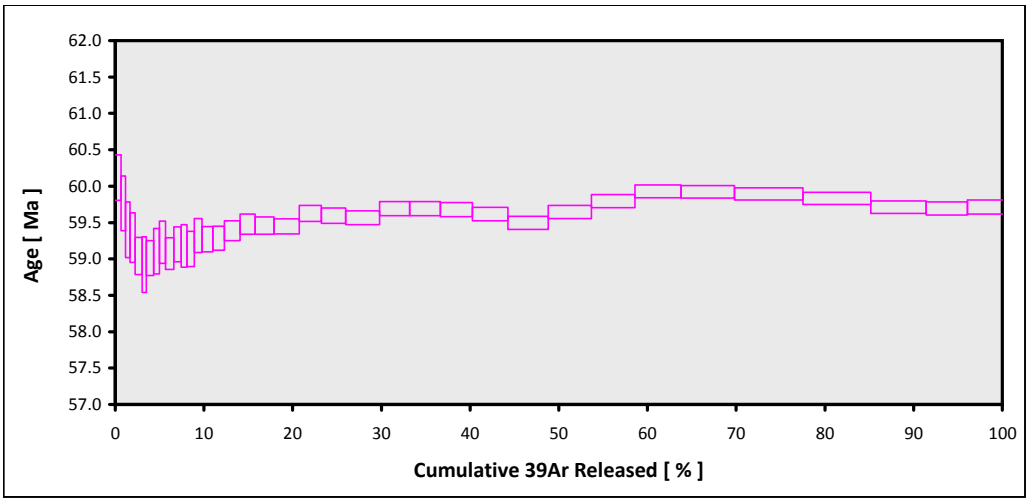
EXP#16D05612 > MV1203-D05-06 > Groundmass > MV1203 (13-INT-04)
WALVIS RIDGE > FEDALLAH GUYOT
15-OSU-07 (7A10-15) > Incremental Heating > Susan Schnur

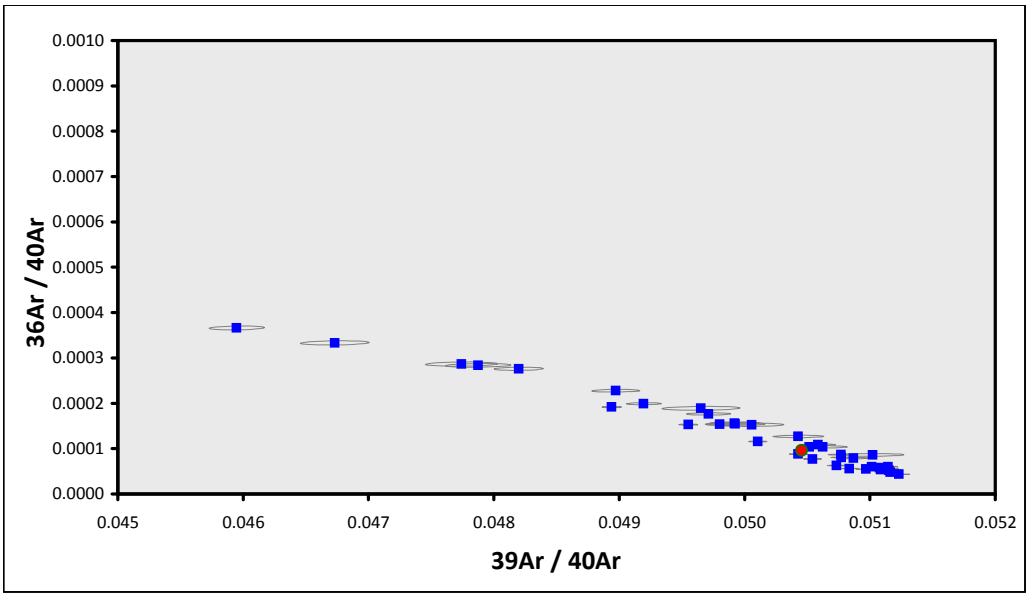
Information on Analysis and Constants Used in Calculations

Project = **MV1203 (13-INT-04)**
Sample = **MV1203-D05-06**
Material = **Groundmass**
Location = **Fedallah Guyot**
Region = **Walvis Ridge**
Analyst = **Susan Schnur**
Irradiation = **15-OSU-07 (7A10-15)**
Position = **X: 0 | Y: 0 | Z/H: 18.05 mm**
FCT-NM Age = **28.201 ± 0.023 Ma**
FCT-NM Reference = **Kuiper et al (2008)**
FCT-NM 40Ar/39Ar Ratio = **9.02403 ± 0.01426**
FCT-NM J-value = **0.00174173 ± 0.00000275**
Air Shot 40Ar/36Ar = **304.4380 ± 0.4140**
Air Shot MDF = **0.99265076 ± 0.00066392 (LIN)**
Experiment Type = **Incremental Heating**
Extraction Method = **Bulk Laser Heating**
Heating = **77 sec**
Isolation = **3.00 min**
Instrument = **ARGUS-VI-D**
Preferred Age = Undefined
Age Classification = Undefined
IGSN = **IESRS0061**
Rock Class = **Igneous>Volcanic>Mafic**
Lithology = **Trachyte**
Lat-Lon = **33°04.3'S - 0°06.7'W**
Age Equations = **Min et al. (2000)**
Negative Intensities = **Allowed**
Collector Calibrations = **36Ar**
Decay 40K = **5.530 ± 0.048 E-10 1/a**
Decay 39Ar = **2.940 ± 0.016 E-07 1/h**
Decay 37Ar = **8.230 ± 0.012 E-04 1/h**
Decay 36Cl = **2.257 ± 0.015 E-06 1/a**
Decay 40K(EC,β^+) = **0.580 ± 0.009 E-10 1/a**
Decay 40K(β^-) = **4.950 ± 0.043 E-10 1/a**
Atmospheric 40/36(a) = **295.50**
Atmospheric 38/36(a) = **0.1869**
Production 39/37(ca) = **0.0006756 ± 0.0000089**
Production 38/37(ca) = **0.0000718 ± 0.0000092**
Production 36/37(ca) = **0.0002663 ± 0.0000004**
Production 40/39(k) = **0.003823 ± 0.000102**
Production 38/39(k) = **0.012031 ± 0.000019**
Production 36/38(cl) = **262.80 ± 1.71**
Scaling Ratio K/Ca = **0.430**
Abundance Ratio 40K/K = **1.1700 ± 0.0100 E-04**
Atomic Weight K = **39.0983 ± 0.0001 g**

Bumpy but potential high-T plateau, high error on 40/36.

Results	40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD	39Ar(k) (%,n)	K/Ca ± 2σ
Age Plateau						
Cannot Calculate						
Total Fusion Age		19.25579 ± 0.00665 ± 0.03%	**59.65 ± 0.19 ± 0.31%**		37	15.9 ± 0.1
			Full External Error ± 1.35			
			Analytical Error ± 0.02			
Normal Isochron						
Cannot Calculate						
Inverse Isochron						
Cannot Calculate						





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

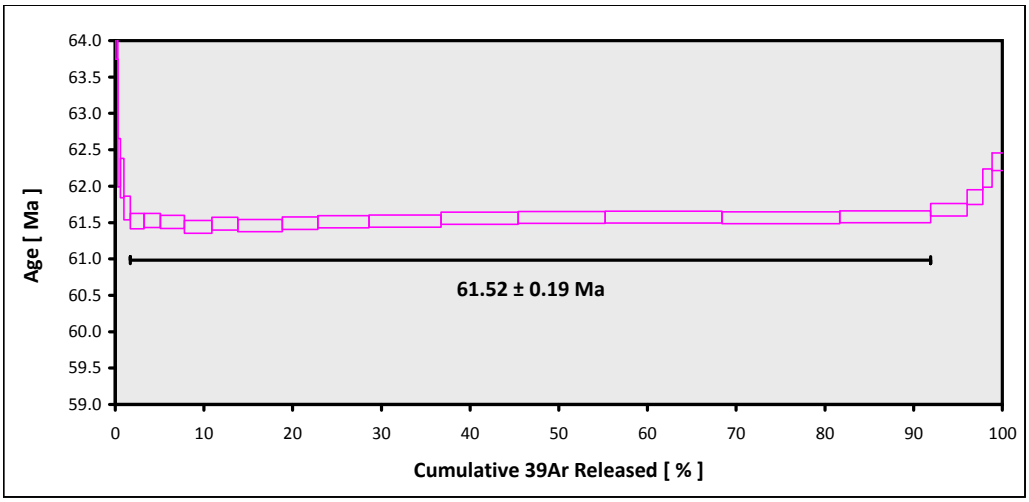
EXP#16D05668 > MV1203-D05-06 > K-Feldspar > MV1203 (13-INT-04)
WALVIS RIDGE > FEDALLAH GUYOT
15-OSU-07 (7A11-15) > Incremental Heating > Susan Schnur

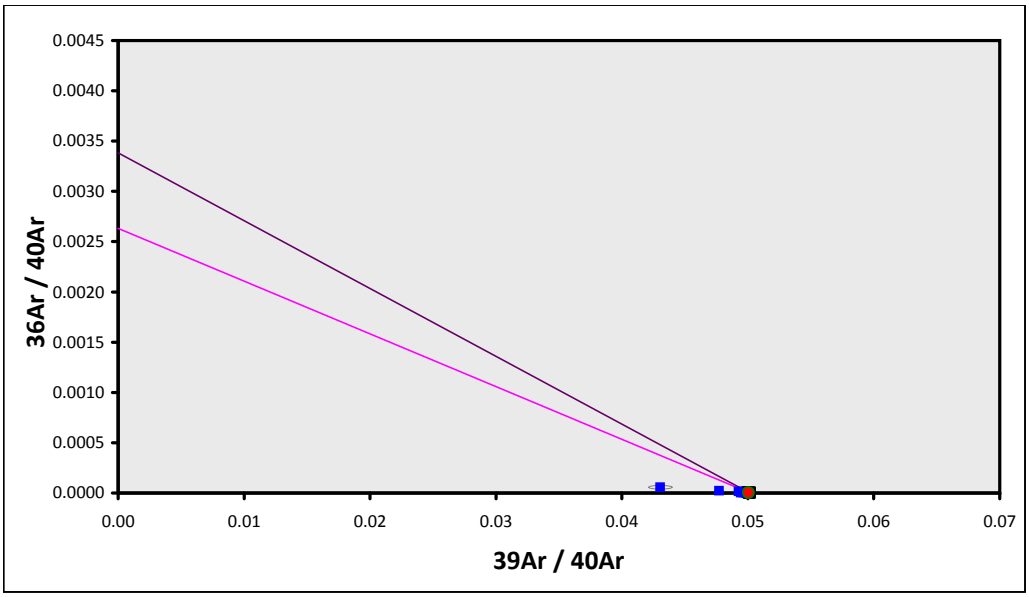
Information on Analysis and Constants Used in Calculations

Project = **MV1203 (13-INT-04)**
Sample = **MV1203-D05-06**
Material = **K-Feldspar**
Location = **Fedallah Guyot**
Region = **Walvis Ridge**
Analyst = **Susan Schnur**
Irradiation = **15-OSU-07 (7A11-15)**
Position = **X: 0 | Y: 0 | Z/H: 20 mm**
FCT-NM Age = **28.201 ± 0.023 Ma**
FCT-NM Reference = **Kuiper et al (2008)**
FCT-NM 40Ar/39Ar Ratio = **9.05358 ± 0.01421**
FCT-NM J-value = **0.00173604 ± 0.00000273**
Air Shot 40Ar/36Ar = **304.4550 ± 0.4141**
Air Shot MDF = **0.99263719 ± 0.00066389 (LIN)**
Experiment Type = **Incremental Heating**
Extraction Method = **Bulk Laser Heating**
Heating = **77 sec**
Isolation = **1.50 min**
Instrument = **ARGUS-VI-D**
Preferred Age = **Plateau Age**
Age Classification = **Eruption Age**
IGSN = **IESRS0062**
Rock Class = **Igneous>Volcanic>Mafic**
Lithology = **Trachyte**
Lat-Lon = **33°04.3'S - 0°06.7'W**
Age Equations = **Min et al. (2000)**
Negative Intensities = **Allowed**
Collector Calibrations = **36Ar**
Decay 40K = **5.530 ± 0.048 E-10 1/a**
Decay 39Ar = **2.940 ± 0.016 E-07 1/h**
Decay 37Ar = **8.230 ± 0.012 E-04 1/h**
Decay 36Cl = **2.257 ± 0.015 E-06 1/a**
Decay 40K(EC,β^+) = **0.580 ± 0.009 E-10 1/a**
Decay 40K(β^-) = **4.950 ± 0.043 E-10 1/a**
Atmospheric 40/36(a) = **295.50**
Atmospheric 38/36(a) = **0.1869**
Production 39/37(ca) = **0.0006756 ± 0.0000089**
Production 38/37(ca) = **0.0000718 ± 0.0000092**
Production 36/37(ca) = **0.0002663 ± 0.0000004**
Production 40/39(k) = **0.003823 ± 0.000102**
Production 38/39(k) = **0.012031 ± 0.000019**
Production 36/38(cl) = **262.80 ± 1.71**
Scaling Ratio K/Ca = **0.430**
Abundance Ratio 40K/K = **1.1700 ± 0.0100 E-04**
Atomic Weight K = **39.0983 ± 0.0001 g**

Good plateau

Results	40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD	39Ar(k) (%,n)	K/Ca ± 2σ
Age Plateau		19.93522 ± 0.00783 (± 0.04%)	**61.52 ± 0.19 (± 0.31%)**	1.06	90.24	18.6 ± 0.4
			Full External Error ± 1.39	39%	14	
			Analytical Error ± 0.02	1.78	2σ Confidence Limit	
				1.0305	Error Magnification	
Total Fusion Age		19.95527 ± 0.00786 (± 0.04%)	**61.59 ± 0.19 (± 0.31%)**		23	18.5 ± 0.2
			Full External Error ± 1.39			
			Analytical Error ± 0.02			
Normal Isochron	**359.48 ± 199.60 (± 55.52%)**	19.93001 ± 0.01887 (± 0.09%)	**61.51 ± 0.20 (± 0.32%)**	1.09	90.24	
			Full External Error ± 1.39	36%	14	
			Analytical Error ± 0.06	1.82	2σ Confidence Limit	
				1.0461	Error Magnification	
Inverse Isochron	**380.16 ± 148.06 (± 38.95%)**	19.92802 ± 0.01881 (± 0.09%)	**61.50 ± 0.20 (± 0.32%)**	1.08	90.24	
Clustered Points			Full External Error ± 1.39	37%	14	
			Analytical Error ± 0.06	1.82	2σ Confidence Limit	
				1.0416	Error Magnification	
				0%	Spreading Factor	





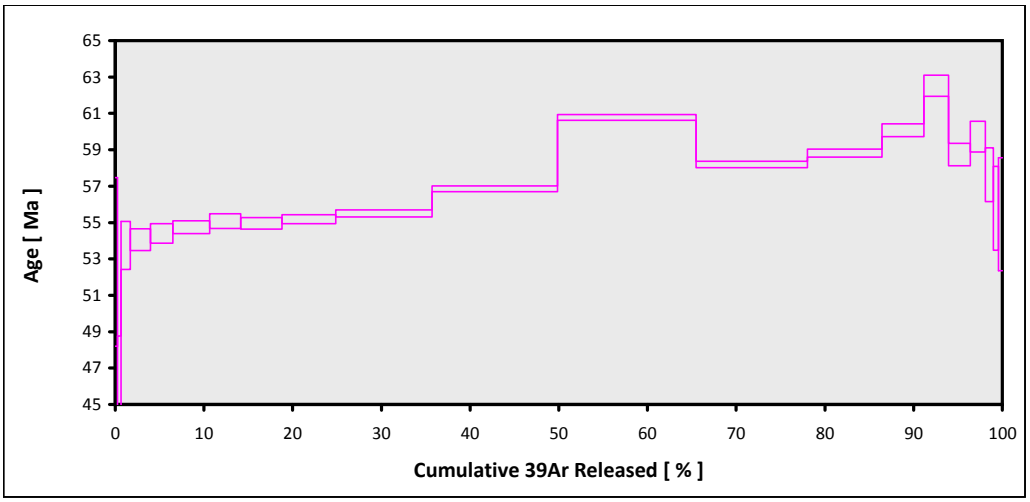
EXP#16D05737 > MV1203-D04-28 > Plagioclase > MV1203 (13-INT-04)
WALVIS RIDGE > QUEEQUEG GUYOT
15-OSU-07 (7A6-15) > Incremental Heating > Susan Schnur

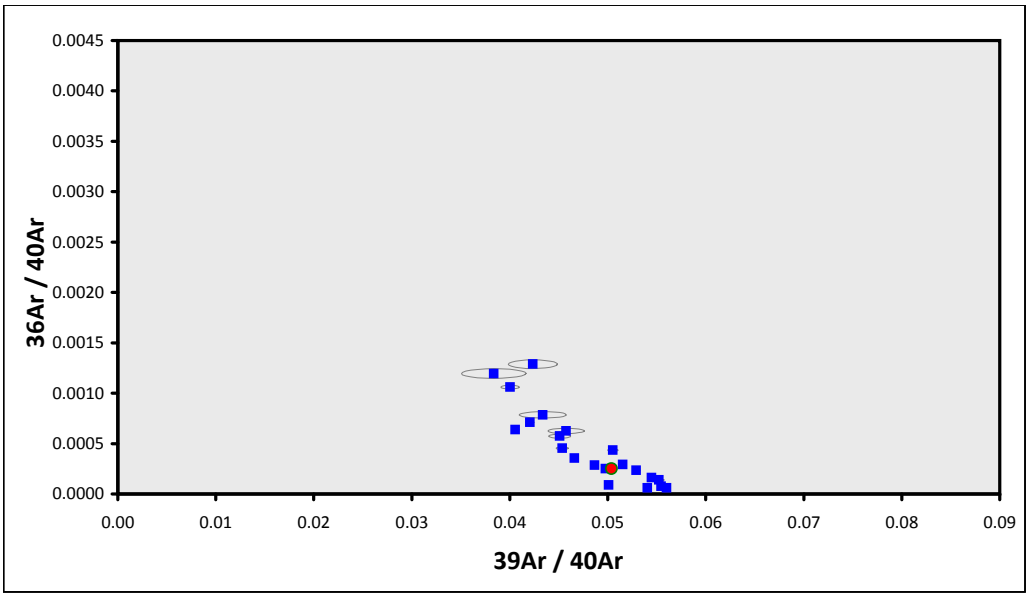
Information on Analysis and Constants Used in Calculations

Project = **MV1203 (13-INT-04)**
Sample = **MV1203-D04-28**
Material = **Plagioclase**
Location = **Queequeg Guyot**
Region = **Walvis Ridge**
Analyst = **Susan Schnur**
Irradiation = **15-OSU-07 (7A6-15)**
Position = **X: 0 | Y: 0 | Z/H: 11.44 mm**
FCT-NM Age = **28.201 ± 0.023 Ma**
FCT-NM Reference = **Kuiper et al (2008)**
FCT-NM 40Ar/39Ar Ratio = **8.93798 ± 0.01421**
FCT-NM J-value = **0.00175849 ± 0.00000280**
Air Shot 40Ar/36Ar = **304.4320 ± 0.4140**
Air Shot MDF = **0.99265555 ± 0.00066394 (LIN)**
Experiment Type = **Incremental Heating**
Extraction Method = **Bulk Laser Heating**
Heating = **77 sec**
Isolation = **3.00 min**
Instrument = **ARGUS-VI-D**
Preferred Age = Undefined
Age Classification = Undefined
IGSN = **IESRS0063**
Rock Class = **Igneous>Volcanic>Mafic**
Lithology = **Trachybasalt**
Lat-Lon = **33°29.1'S - 0°32.1'W**
Age Equations = **Min et al. (2000)**
Negative Intensities = **Allowed**
Collector Calibrations = **36Ar**
Decay 40K = **5.530 ± 0.048 E-10 1/a**
Decay 39Ar = **2.940 ± 0.016 E-07 1/h**
Decay 37Ar = **8.230 ± 0.012 E-04 1/h**
Decay 36Cl = **2.257 ± 0.015 E-06 1/a**
Decay 40K(EC,β^+) = **0.580 ± 0.009 E-10 1/a**
Decay 40K(β^-) = **4.950 ± 0.043 E-10 1/a**
Atmospheric 40/36(a) = **295.50**
Atmospheric 38/36(a) = **0.1869**
Production 39/37(ca) = **0.0006756 ± 0.0000089**
Production 38/37(ca) = **0.0000718 ± 0.0000092**
Production 36/37(ca) = **0.0002663 ± 0.0000004**
Production 40/39(k) = **0.003823 ± 0.000102**
Production 38/39(k) = **0.012031 ± 0.000019**
Production 36/38(cl) = **262.80 ± 1.71**
Scaling Ratio K/Ca = **0.430**
Abundance Ratio 40K/K = **1.1700 ± 0.0100 E-04**
Atomic Weight K = **39.0983 ± 0.0001 g**

Very bump, high-T steps are not useful, possible start of a low-T plateau.

Results	40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD	39Ar(k) (%,n)	K/Ca ± 2σ
Age Plateau						
Cannot Calculate						
Total Fusion Age		18.37439 ± 0.02449 ± 0.13%	**57.50 ± 0.20 ± 0.34%**		21	0.0120 ± 0.0000
			Full External Error ± 1.30			
			Analytical Error ± 0.08			
Normal Isochron						
Cannot Calculate						
Inverse Isochron						
Cannot Calculate						





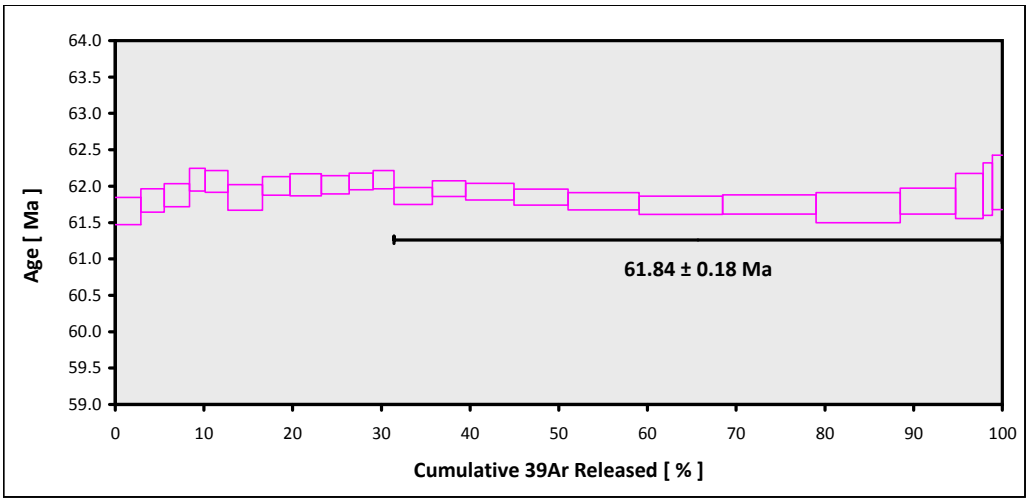
EXP#16D06637 > MV1203-D16-11 > K-Feldspar > MV1203 (13-INT-04)
WALVIS RIDGE > BULKINGTON WEST
15-OSU-07 (7A30-15) > Incremental Heating > Susan Schnur

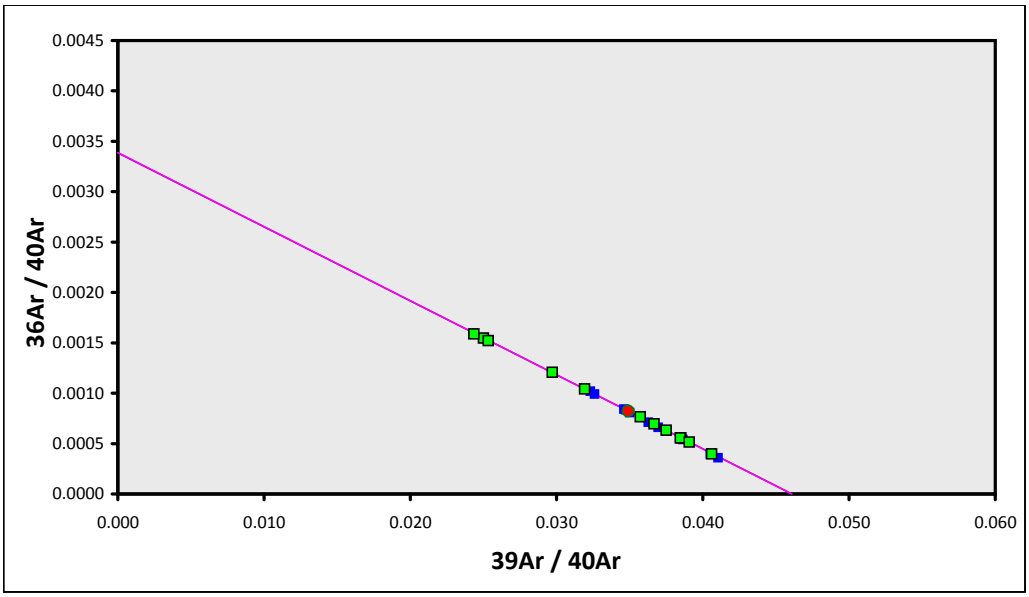
Information on Analysis and Constants Used in Calculations

Project = **MV1203 (13-INT-04)**
Sample = **MV1203-D16-11**
Material = **K-Feldspar**
Location = **Bulkington West**
Region = **Walvis Ridge**
Analyst = **Susan Schnur**
Irradiation = **15-OSU-07 (7A30-15)**
Position = **X: 0 | Y: 0 | Z/H: 51.69 mm**
FCT-NM Age = **28.201 ± 0.023 Ma**
FCT-NM Reference = **Kuiper et al (2008)**
FCT-NM 40Ar/39Ar Ratio = **9.80048 ± 0.01421**
FCT-NM J-value = **0.00160374 ± 0.00000233**
Air Shot 40Ar/36Ar = **304.5990 ± 0.4173**
Air Shot MDF = **0.99252233 ± 0.00066478 (LIN)**
Experiment Type = **Incremental Heating**
Extraction Method = **Bulk Laser Heating**
Heating = **77 sec**
Isolation = **1.50 min**
Instrument = **ARGUS-VI-D**
Preferred Age = **Plateau Age**
Age Classification = **Eruption Age**
IGSN = **IESRS0064**
Rock Class = **Igneous>Volcanic>Mafic**
Lithology = **Trachyte**
Lat-Lon = **31°31.3'S - 1°56.9'W**
Age Equations = **Min et al. (2000)**
Negative Intensities = **Allowed**
Collector Calibrations = **36Ar**
Decay 40K = **5.530 ± 0.048 E-10 1/a**
Decay 39Ar = **2.940 ± 0.016 E-07 1/h**
Decay 37Ar = **8.230 ± 0.012 E-04 1/h**
Decay 36Cl = **2.257 ± 0.015 E-06 1/a**
Decay 40K(EC,β^+) = **0.580 ± 0.009 E-10 1/a**
Decay 40K(β^-) = **4.950 ± 0.043 E-10 1/a**
Atmospheric 40/36(a) = **295.50**
Atmospheric 38/36(a) = **0.1869**
Production 39/37(ca) = **0.0006756 ± 0.0000089**
Production 38/37(ca) = **0.0000718 ± 0.0000092**
Production 36/37(ca) = **0.0002663 ± 0.0000004**
Production 40/39(k) = **0.003823 ± 0.000102**
Production 38/39(k) = **0.012031 ± 0.000019**
Production 36/38(cl) = **262.80 ± 1.71**
Scaling Ratio K/Ca = **0.430**
Abundance Ratio 40K/K = **1.1700 ± 0.0100 E-04**
Atomic Weight K = **39.0983 ± 0.0001 g**

Low-T bumpy but high-T yields a slightly higher error plateau.

Results	40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD	39Ar(k) (%,n)	K/Ca ± 2σ
Age Plateau		21.69403 ± 0.01811 ± 0.08%	**61.84 ± 0.18 ± 0.30%**	1.52 12%	68.58 12	4.62 ± 0.49
			Full External Error ± 1.40	1.85	2σ Confidence Limit	
			Analytical Error ± 0.05	1.2334	Error Magnification	
Total Fusion Age		21.69633 ± 0.01332 ± 0.06%	**61.85 ± 0.18 ± 0.29%**		23	5.28 ± 0.03
			Full External Error ± 1.40			
			Analytical Error ± 0.04			
Normal Isochron	**294.89 ± 1.62 ± 0.55%**	21.70585 ± 0.03614 ± 0.17%	**61.88 ± 0.20 ± 0.33%**	1.61 10%	68.58 12	
			Full External Error ± 1.40	1.89	2σ Confidence Limit	
			Analytical Error ± 0.10	1.2684	Error Magnification	
Inverse Isochron	**294.98 ± 1.62 ± 0.55%**	21.70399 ± 0.03608 ± 0.17%	**61.87 ± 0.20 ± 0.33%**	1.61 10%	68.58 12	
			Full External Error ± 1.40	1.89	2σ Confidence Limit	
			Analytical Error ± 0.10	1.2681	Error Magnification	
				35%	Spreading Factor	





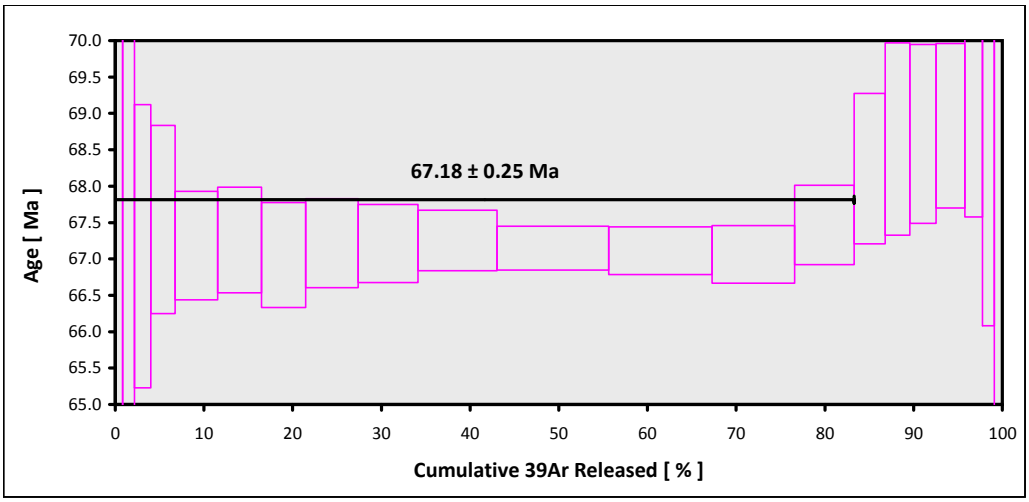
EXP#16D06675 > MV1203-D13-09 > Plagioclase > MV1203 (13-INT-04)
WALVIS RIDGE > DAGGOO GUYOT
15-OSU-07 (7A20-15) > Incremental Heating > Susan Schnur

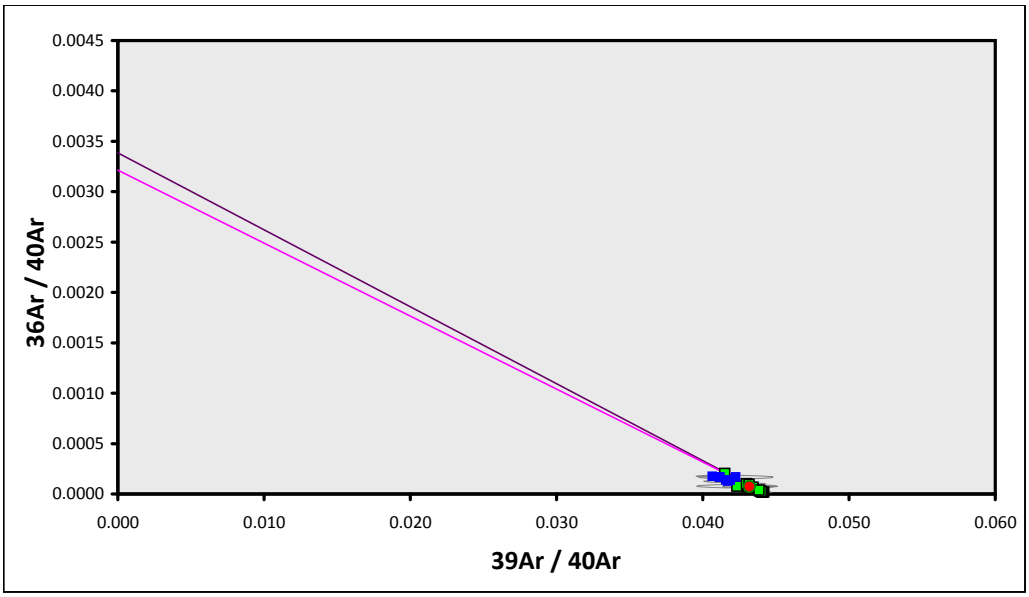
Information on Analysis and Constants Used in Calculations

Project = **MV1203 (13-INT-04)**
Sample = **MV1203-D13-09**
Material = **Plagioclase**
Location = **Daggoo Guyot**
Region = **Walvis Ridge**
Analyst = **Susan Schnur**
Irradiation = **15-OSU-07 (7A20-15)**
Position = **X: 0 | Y: 0 | Z/H: 35.96 mm**
FCT-NM Age = **28.201 ± 0.023 Ma**
FCT-NM Reference = **Kuiper et al (2008)**
FCT-NM 40Ar/39Ar Ratio = **9.36697 ± 0.01424**
FCT-NM J-value = **0.00167796 ± 0.00000255**
Air Shot 40Ar/36Ar = **304.6060 ± 0.4204**
Air Shot MDF = **0.99251675 ± 0.00066599 (LIN)**
Experiment Type = **Incremental Heating**
Extraction Method = **Bulk Laser Heating**
Heating = **77 sec**
Isolation = **3.00 min**
Instrument = **ARGUS-VI-D**
Preferred Age = **Plateau Age**
Age Classification = **Eruption Age**
IGSN = **IESRS0065**
Rock Class = **Igneous>Volcanic>Mafic**
Lithology = **Basalt**
Lat-Lon = **30°27.6'S - 0°10.2'W**
Age Equations = **Min et al. (2000)**
Negative Intensities = **Allowed**
Collector Calibrations = **36Ar**
Decay 40K = **5.530 ± 0.048 E-10 1/a**
Decay 39Ar = **2.940 ± 0.016 E-07 1/h**
Decay 37Ar = **8.230 ± 0.012 E-04 1/h**
Decay 36Cl = **2.257 ± 0.015 E-06 1/a**
Decay 40K(EC,β^+) = **0.580 ± 0.009 E-10 1/a**
Decay 40K(β^-) = **4.950 ± 0.043 E-10 1/a**
Atmospheric 40/36(a) = **295.50**
Atmospheric 38/36(a) = **0.1869**
Production 39/37(ca) = **0.0006756 ± 0.0000089**
Production 38/37(ca) = **0.0000718 ± 0.0000092**
Production 36/37(ca) = **0.0002663 ± 0.0000004**
Production 40/39(k) = **0.003823 ± 0.000102**
Production 38/39(k) = **0.012031 ± 0.000019**
Production 36/38(cl) = **262.80 ± 1.71**
Scaling Ratio K/Ca = **0.430**
Abundance Ratio 40K/K = **1.1700 ± 0.0100 E-04**
Atomic Weight K = **39.0983 ± 0.0001 g**

Good plateau

Results	40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD	39Ar(k) (%,n)	K/Ca ± 2σ
Age Plateau		22.55765 ± 0.04896	**67.18 ± 0.25**	0.22	83.31	0.0208 ± 0.0003
Overestimated		± 0.22%	**± 0.37%**	100%	14	
		Full External Error	± 1.52	1.78	2σ Confidence Limit	
		Analytical Error	± 0.14	1.0000	Error Magnification	
Total Fusion Age		22.65065 ± 0.05675	**67.45 ± 0.26**		21	0.0205 ± 0.0001
		± 0.25%	**± 0.39%**			
		Full External Error	± 1.53			
		Analytical Error	± 0.17			
Normal Isochron	**318.75 ± 42.45**	22.52141 ± 0.07083	**67.08 ± 0.29**	0.22	83.31	
Overestimated	**± 13.32%**	± 0.31%	**± 0.43%**	100%	14	
		Full External Error	± 1.53	1.82	2σ Confidence Limit	
		Analytical Error	± 0.21	1.0000	Error Magnification	
Inverse Isochron	**311.22 ± 42.18**	22.53905 ± 0.07058	**67.13 ± 0.29**	0.20	83.31	
Overestimated	**± 13.55%**	± 0.31%	**± 0.43%**	100%	14	
		Full External Error	± 1.53	1.82	2σ Confidence Limit	
		Analytical Error	± 0.21	1.0000	Error Magnification	
				6%	Spreading Factor	





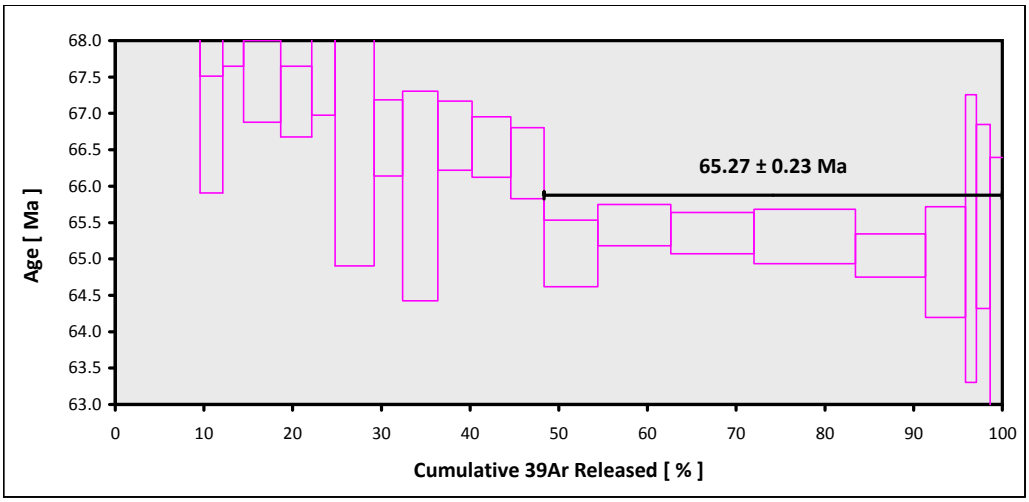
EXP#16D07164 > MV1203-D15-07 > K-Feldspar > MV1203 (13-INT-04)
WALVIS RIDGE > BULKINGTON EAST
15-OSU-07 (7A27-15) > Incremental Heating > Dan Miggins

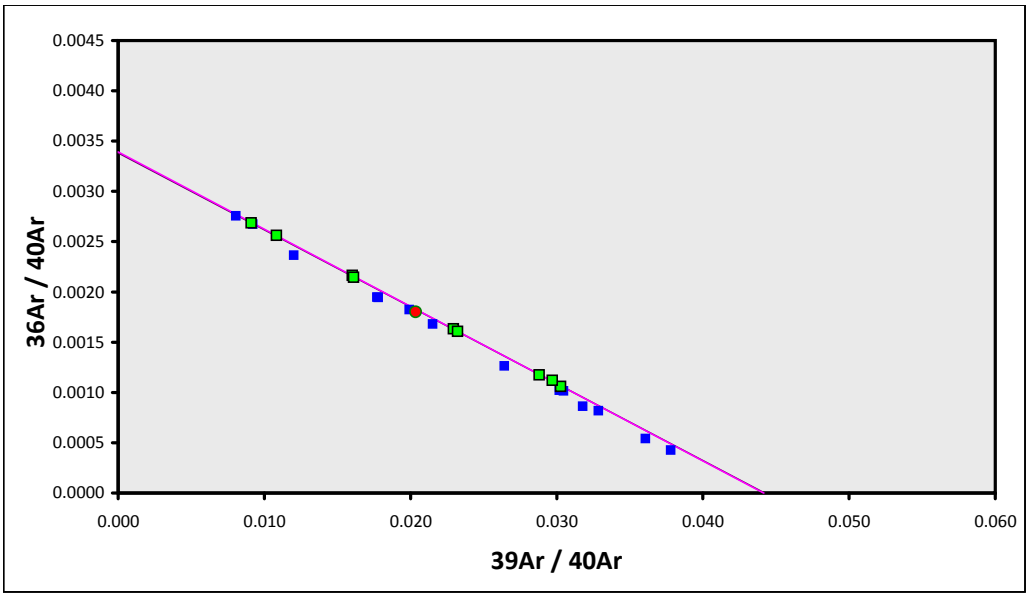
Information on Analysis and Constants Used in Calculations

Project = **MV1203 (13-INT-04)**
Sample = **MV1203-D15-07**
Material = **K-Feldspar**
Location = **Bulkington East**
Region = **Walvis Ridge**
Analyst = **Dan Miggins**
Irradiation = **15-OSU-07 (7A27-15)**
Position = **X: 0 | Y: 0 | Z/H: 47.48 mm**
FCT-NM Age = **28.201 ± 0.023 Ma**
FCT-NM Reference = **Kuiper et al (2008)**
FCT-NM 40Ar/39Ar Ratio = **9.67233 ± 0.01422**
FCT-NM J-value = **0.00162499 ± 0.00000239**
Air Shot 40Ar/36Ar = **304.7240 ± 0.4144**
Air Shot MDF = **0.99242272 ± 0.00066330 (LIN)**
Experiment Type = **Incremental Heating**
Extraction Method = **Bulk Laser Heating**
Heating = **77 sec**
Isolation = **1.50 min**
Instrument = **ARGUS-VI-D**
Preferred Age = **Plateau Age**
Age Classification = **Eruption Age**
IGSN = **IESRS0066**
Rock Class = **Igneous>Volcanic>Mafic**
Lithology = **Trachyte**
Lat-Lon = **31°17.1'S - 1°12.2'W**
Age Equations = **Min et al. (2000)**
Negative Intensities = **Allowed**
Collector Calibrations = **36Ar**
Decay 40K = **5.530 ± 0.048 E-10 1/a**
Decay 39Ar = **2.940 ± 0.016 E-07 1/h**
Decay 37Ar = **8.230 ± 0.012 E-04 1/h**
Decay 36Cl = **2.257 ± 0.015 E-06 1/a**
Decay 40K(EC,β^+) = **0.580 ± 0.009 E-10 1/a**
Decay 40K(β^-) = **4.950 ± 0.043 E-10 1/a**
Atmospheric 40/36(a) = **295.50**
Atmospheric 38/36(a) = **0.1869**
Production 39/37(ca) = **0.0006756 ± 0.0000089**
Production 38/37(ca) = **0.0000718 ± 0.0000092**
Production 36/37(ca) = **0.0002663 ± 0.0000004**
Production 40/39(k) = **0.003823 ± 0.000102**
Production 38/39(k) = **0.012031 ± 0.000019**
Production 36/38(cl) = **262.80 ± 1.71**
Scaling Ratio K/Ca = **0.430**
Abundance Ratio 40K/K = **1.1700 ± 0.0100 E-04**
Atomic Weight K = **39.0983 ± 0.0001 g**

Low-T shows recoil but high-T yields a decent plateau.

Results	40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD	39Ar(k) (%,n)	K/Ca ± 2σ
Age Plateau		22.61607 ± 0.04927 (± 0.22%)	**65.27 ± 0.23 (± 0.36%)**	0.83	51.67	0.68 ± 0.18
		Full External Error ± 1.48		57%	9	
		Analytical Error ± 0.14		2.00	2σ Confidence Limit	
				1.0000	Error Magnification	
Total Fusion Age		22.98468 ± 0.05132 (± 0.22%)	**66.31 ± 0.24 (± 0.36%)**		23	1.01 ± 0.01
		Full External Error ± 1.50				
		Analytical Error ± 0.15				
Normal Isochron	**294.90 ± 1.51 (± 0.51%)**	22.64710 ± 0.09343 (± 0.41%)	**65.35 ± 0.33 (± 0.50%)**	0.86	51.67	
		Full External Error ± 1.50		54%	9	
		Analytical Error ± 0.26		2.07	2σ Confidence Limit	
				1.0000	Error Magnification	
Inverse Isochron	**294.89 ± 1.51 (± 0.51%)**	22.64827 ± 0.09340 (± 0.41%)	**65.36 ± 0.33 (± 0.50%)**	0.86	51.67	
		Full External Error ± 1.50		54%	9	
		Analytical Error ± 0.26		2.07	2σ Confidence Limit	
				1.0000	Error Magnification	
				48%	Spreading Factor	





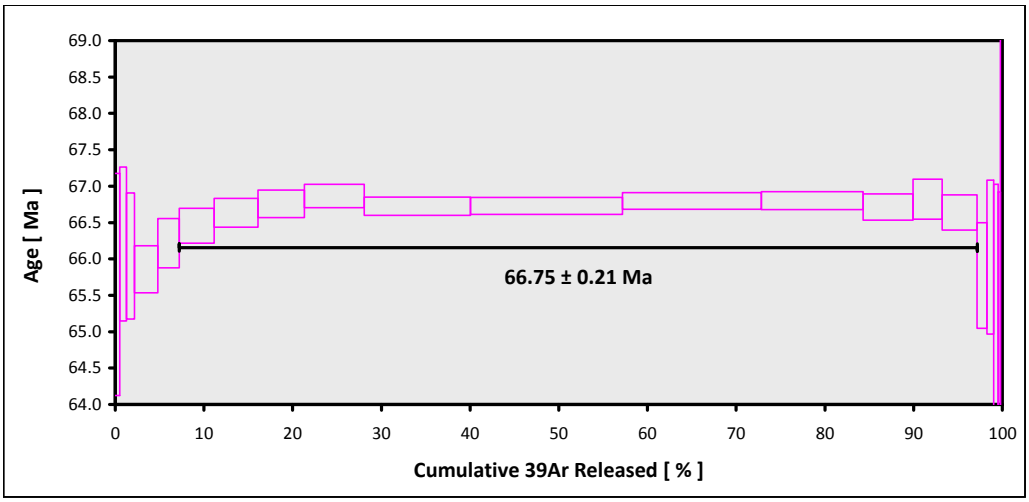
EXP#16D07228 > MV1203-D09-01 > Plagioclase > MV1203 (13-INT-04)
WALVIS RIDGE > HOSEA GUYOT
15-OSU-07 (7A15-15) > Incremental Heating > Susan Schnur

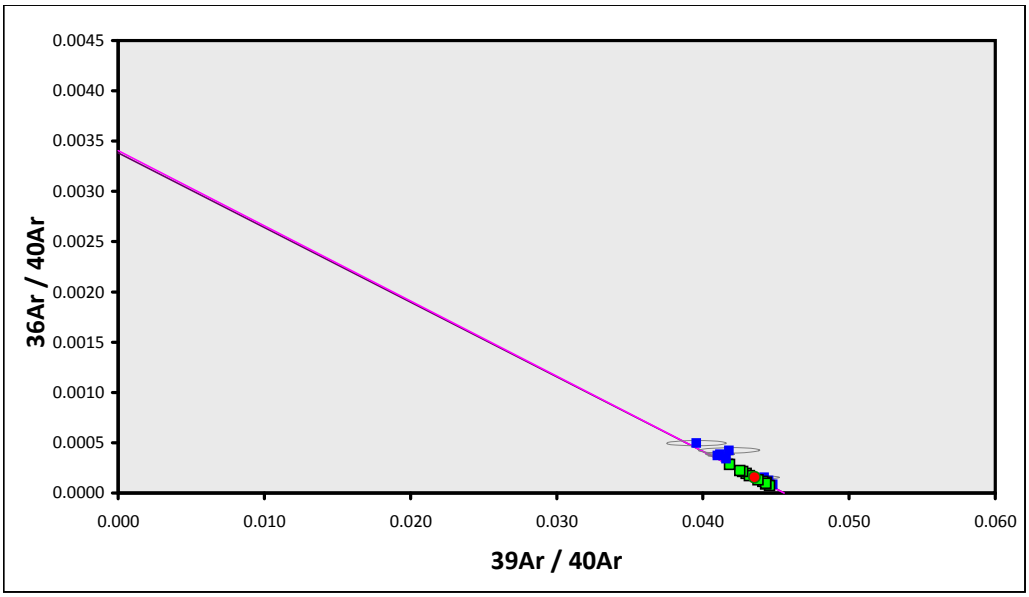
Information on Analysis and Constants Used in Calculations

Project = **MV1203 (13-INT-04)**
Sample = **MV1203-D09-01**
Material = **Plagioclase**
Location = **Hosea Guyot**
Region = **Walvis Ridge**
Analyst = **Susan Schnur**
Irradiation = **15-OSU-07 (7A15-15)**
Position = **X: 0 | Y: 0 | Z/H: 26.92 mm**
FCT-NM Age = **28.201 ± 0.023 Ma**
FCT-NM Reference = **Kuiper et al (2008)**
FCT-NM 40Ar/39Ar Ratio = **9.17382 ± 0.01422**
FCT-NM J-value = **0.00171329 ± 0.00000266**
Air Shot 40Ar/36Ar = **304.7290 ± 0.4175**
Air Shot MDF = **0.99241873 ± 0.00066450 (LIN)**
Experiment Type = **Incremental Heating**
Extraction Method = **Bulk Laser Heating**
Heating = **77 sec**
Isolation = **1.50 min**
Instrument = **ARGUS-VI-D**
Preferred Age = **Plateau Age**
Age Classification = **Eruption Age**
IGSN = **IESRS0067**
Rock Class = **Igneous>Volcanic>Mafic**
Lithology = **Trachybasalt**
Lat-Lon = **31°30.1'S - 0°40.2'E**
Age Equations = **Min et al. (2000)**
Negative Intensities = **Allowed**
Collector Calibrations = **36Ar**
Decay 40K = **5.530 ± 0.048 E-10 1/a**
Decay 39Ar = **2.940 ± 0.016 E-07 1/h**
Decay 37Ar = **8.230 ± 0.012 E-04 1/h**
Decay 36Cl = **2.257 ± 0.015 E-06 1/a**
Decay 40K(EC,β^+) = **0.580 ± 0.009 E-10 1/a**
Decay 40K(β^-) = **4.950 ± 0.043 E-10 1/a**
Atmospheric 40/36(a) = **295.50**
Atmospheric 38/36(a) = **0.1869**
Production 39/37(ca) = **0.0006756 ± 0.0000089**
Production 38/37(ca) = **0.0000718 ± 0.0000092**
Production 36/37(ca) = **0.0002663 ± 0.0000004**
Production 40/39(k) = **0.003823 ± 0.000102**
Production 38/39(k) = **0.012031 ± 0.000019**
Production 36/38(cl) = **262.80 ± 1.71**
Scaling Ratio K/Ca = **0.430**
Abundance Ratio 40K/K = **1.1700 ± 0.0100 E-04**
Atomic Weight K = **39.0983 ± 0.0001 g**

Good plateau

Results	40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD	39Ar(k) (%,n)	K/Ca ± 2σ
Age Plateau		21.94614 ± 0.01760	**66.75 ± 0.21**	1.23	89.94	0.0279 ± 0.0045
		± 0.08%	**± 0.31%**	26%	11	
		Full External Error ± 1.51		1.89	2σ Confidence Limit	
		Analytical Error ± 0.05		1.1102	Error Magnification	
Total Fusion Age		21.91689 ± 0.01669	**66.66 ± 0.21**		21	0.0290 ± 0.0001
		± 0.08%	**± 0.31%**			
		Full External Error ± 1.51				
		Analytical Error ± 0.05				
Normal Isochron	**295.45 ± 14.43**	21.94526 ± 0.05232	**66.74 ± 0.26**	1.38	89.94	
	± 4.88%	± 0.24%	**± 0.38%**	19%	11	
		Full External Error ± 1.51		1.94	2σ Confidence Limit	
		Analytical Error ± 0.16		1.1742	Error Magnification	
Inverse Isochron	**293.60 ± 14.26**	21.95266 ± 0.05180	**66.77 ± 0.26**	1.35	89.94	
	± 4.86%	± 0.24%	**± 0.38%**	20%	11	
		Full External Error ± 1.52		1.94	2σ Confidence Limit	
		Analytical Error ± 0.15		1.1636	Error Magnification	
				6%	Spreading Factor	





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

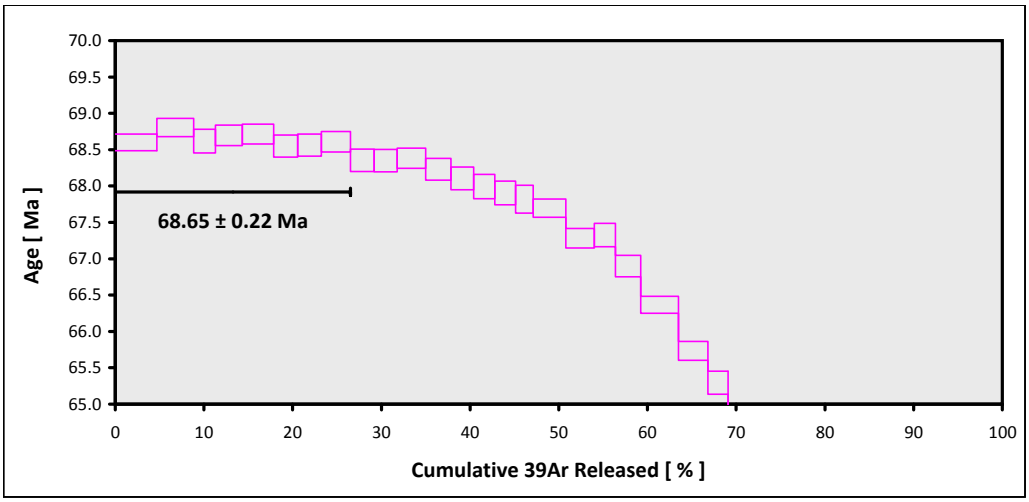
EXP#16D07263 > MV1203-D10-19 > Groundmass > MV1203 (13-INT-04)
WALVIS RIDGE > PELEG SEAMOUNT
15-OSU-07 (7A16-15) > Incremental Heating > Susan Schnur

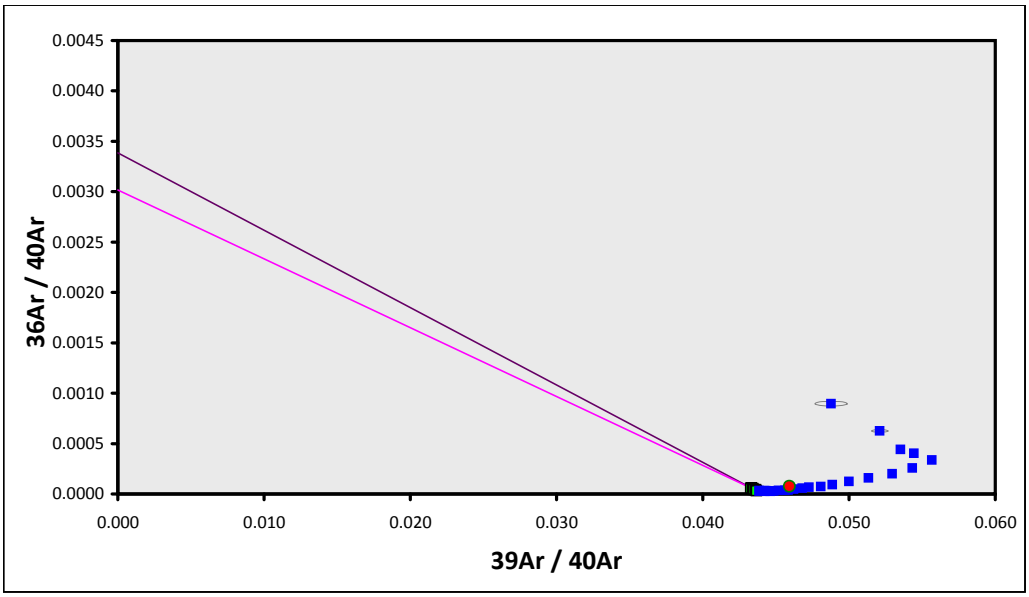
Information on Analysis and Constants Used in Calculations

Project = **MV1203 (13-INT-04)**
Sample = **MV1203-D10-19**
Material = **Groundmass**
Location = **Peleg Seamount**
Region = **Walvis Ridge**
Analyst = **Susan Schnur**
Irradiation = **15-OSU-07 (7A16-15)**
Position = **X: 0 | Y: 0 | Z/H: 28.95 mm**
FCT-NM Age = **28.201 ± 0.023 Ma**
FCT-NM Reference = **Kuiper et al (2008)**
FCT-NM 40Ar/39Ar Ratio = **9.21364 ± 0.01419**
FCT-NM J-value = **0.00170588 ± 0.00000263**
Air Shot 40Ar/36Ar = **304.7330 ± 0.4175**
Air Shot MDF = **0.99241555 ± 0.00066449 (LIN)**
Experiment Type = **Incremental Heating**
Extraction Method = **Bulk Laser Heating**
Heating = **77 sec**
Isolation = **3.00 min**
Instrument = **ARGUS-VI-D**
Preferred Age = **Plateau Age**
Age Classification = **Eruption Age**
IGSN = **IESRS0068**
Rock Class = **Igneous>Volcanic>Mafic**
Lithology = **Tephrite**
Lat-Lon = **30°07.0'S - 1°22.3'E**
Age Equations = **Min et al. (2000)**
Negative Intensities = **Allowed**
Collector Calibrations = **36Ar**
Decay 40K = **5.530 ± 0.048 E-10 1/a**
Decay 39Ar = **2.940 ± 0.016 E-07 1/h**
Decay 37Ar = **8.230 ± 0.012 E-04 1/h**
Decay 36Cl = **2.257 ± 0.015 E-06 1/a**
Decay 40K(EC,β^+) = **0.580 ± 0.009 E-10 1/a**
Decay 40K(β^-) = **4.950 ± 0.043 E-10 1/a**
Atmospheric 40/36(a) = **295.50**
Atmospheric 38/36(a) = **0.1869**
Production 39/37(ca) = **0.0006756 ± 0.0000089**
Production 38/37(ca) = **0.0000718 ± 0.0000092**
Production 36/37(ca) = **0.0002663 ± 0.0000004**
Production 40/39(k) = **0.003823 ± 0.000102**
Production 38/39(k) = **0.012031 ± 0.000019**
Production 36/38(cl) = **262.80 ± 1.71**
Scaling Ratio K/Ca = **0.430**
Abundance Ratio 40K/K = **1.1700 ± 0.0100 E-04**
Atomic Weight K = **39.0983 ± 0.0001 g**

Low-T plateau is likely correct, but includes only a small % of total gas.

Results	40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD	39Ar(k) (%,n)	K/Ca ± 2σ
Age Plateau		22.68278 ± 0.02119	**68.65 ± 0.22**	1.67	26.53	0.551 ± 0.054
		± 0.09%	**± 0.32%**	11%	8	
		Full External Error ± 1.55		2.07	2σ Confidence Limit	
		Analytical Error ± 0.06		1.2941	Error Magnification	
Total Fusion Age		21.27579 ± 0.00819	**64.47 ± 0.20**		37	0.308 ± 0.000
		± 0.04%	**± 0.30%**			
		Full External Error ± 1.46				
		Analytical Error ± 0.02				
Normal Isochron	**345.48 ± 109.69**	22.62729 ± 0.12250	**68.49 ± 0.42**	1.84	26.53	
	± 31.75%	± 0.54%	**± 0.61%**	9%	8	
		Full External Error ± 1.59		2.15	2σ Confidence Limit	
		Analytical Error ± 0.36		1.3568	Error Magnification	
Inverse Isochron	**331.63 ± 101.65**	22.64324 ± 0.12186	**68.53 ± 0.42**	1.82	26.53	
Clustered Points	**± 30.65%**	± 0.54%	**± 0.61%**	9%	8	
		Full External Error ± 1.59		2.15	2σ Confidence Limit	
		Analytical Error ± 0.36		1.3505	Error Magnification	
				1%	Spreading Factor	





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

EXP#16D07319 > MV1203-D12-01 > Groundmass > MV1203 (13-INT-04)
WALVIS RIDGE > NARWHAL SEAMOUNT
15-OSU-07 (7A18-15) > Incremental Heating > Susan Schnur

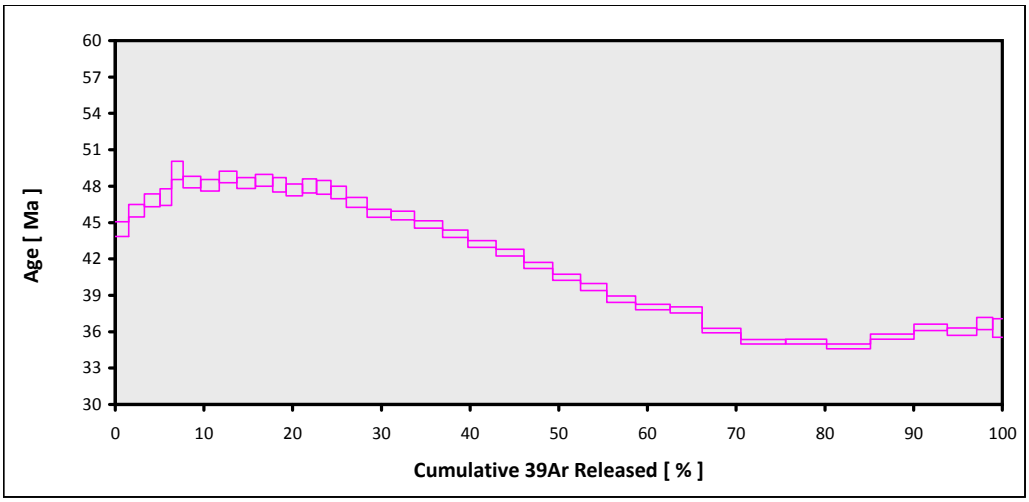
Information on Analysis and Constants Used in Calculations

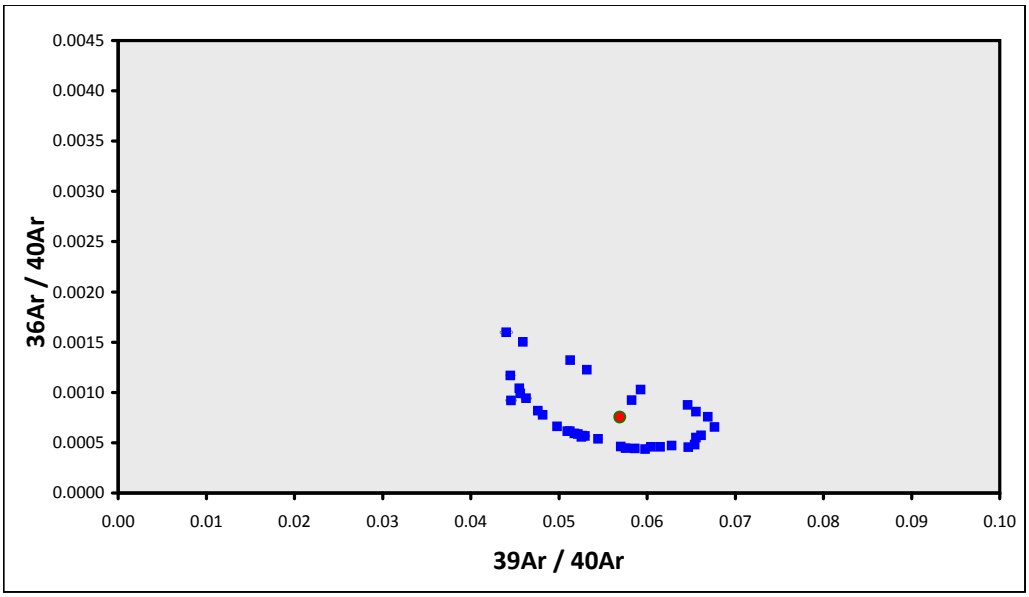
Project = **MV1203 (13-INT-04)**
Sample = **MV1203-D12-01**
Material = **Groundmass**
Location = **Narwhal Seamount**
Region = **Walvis Ridge**
Analyst = **Susan Schnur**
Irradiation = **15-OSU-07 (7A18-15)**
Position = **X: 0 | Y: 0 | Z/H: 32.5 mm**
FCT-NM Age = **28.201 ± 0.023 Ma**
FCT-NM Reference = **Kuiper et al (2008)**
FCT-NM 40Ar/39Ar Ratio = **9.28822 ± 0.01421**
FCT-NM J-value = **0.00169219 ± 0.00000259**
Air Shot 40Ar/36Ar = **304.7350 ± 0.4144**
Air Shot MDF = **0.99241395 ± 0.00066328 (LIN)**
Experiment Type = **Incremental Heating**
Extraction Method = **Bulk Laser Heating**
Heating = **77 sec**
Isolation = **3.00 min**
Instrument = **ARGUS-VI-D**
Preferred Age = Undefined
Age Classification = Undefined
IGSN = **IESRS0069**
Rock Class = **Igneous>Volcanic>Mafic**
Lithology = **Basalt**
Lat-Lon = **30°42.5'S - 0°18.9'W**
Age Equations = **Min et al. (2000)**
Negative Intensities = **Allowed**
Collector Calibrations = **36Ar**
Decay 40K = **5.530 ± 0.048 E-10 1/a**
Decay 39Ar = **2.940 ± 0.016 E-07 1/h**
Decay 37Ar = **8.230 ± 0.012 E-04 1/h**
Decay 36Cl = **2.257 ± 0.015 E-06 1/a**
Decay 40K(EC,β^+) = **0.580 ± 0.009 E-10 1/a**
Decay 40K(β^-) = **4.950 ± 0.043 E-10 1/a**
Atmospheric 40/36(a) = **295.50**
Atmospheric 38/36(a) = **0.1869**
Production 39/37(ca) = **0.0006756 ± 0.0000089**
Production 38/37(ca) = **0.0000718 ± 0.0000092**
Production 36/37(ca) = **0.0002663 ± 0.0000004**
Production 40/39(k) = **0.003823 ± 0.000102**
Production 38/39(k) = **0.012031 ± 0.000019**
Production 36/38(cl) = **262.80 ± 1.71**
Scaling Ratio K/Ca = **0.430**
Abundance Ratio 40K/K = **1.1700 ± 0.0100 E-04**
Atomic Weight K = **39.0983 ± 0.0001 g**

Strange wavy pattern in plateau, low-T plateau likely accurate, but includes too little gas.

Results

Results	40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD	39Ar(k) (%,n)	K/Ca ± 2σ
Age Plateau						
Cannot Calculate						
Total Fusion Age		13.64998 ± 0.01811 ± 0.13%	**41.29 ± 0.14 ± 0.33%**		37	0.0494 ± 0.0001
			Full External Error ± 0.94			
			Analytical Error ± 0.05			
Normal Isochron						
Cannot Calculate						
Inverse Isochron						
Cannot Calculate						





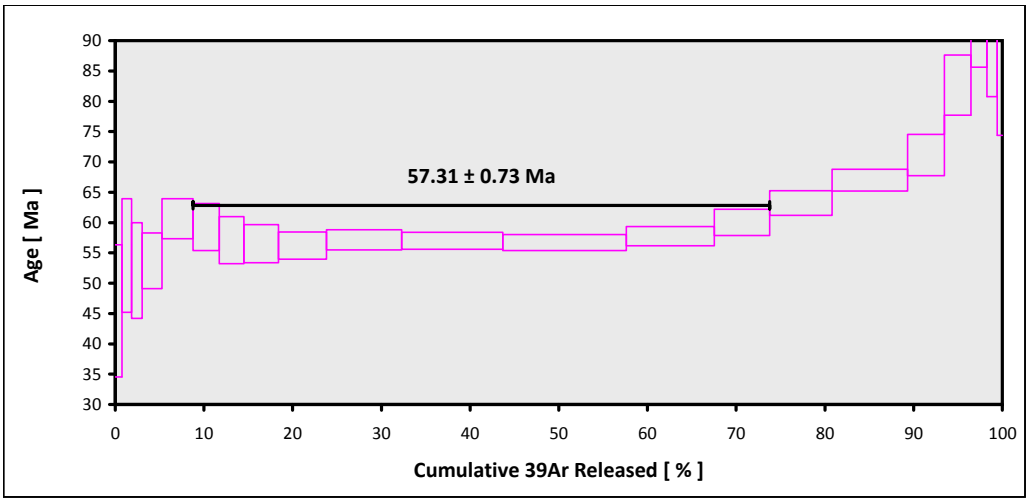
EXP#16D07401 > MV1203-D14-05 > Plagioclase > MV1203 (13-INT-04)
WALVIS RIDGE > BOTTLENOSE SEAMOUNT
15-OSU-07 (7A22-15) > Incremental Heating > Susan Schnur

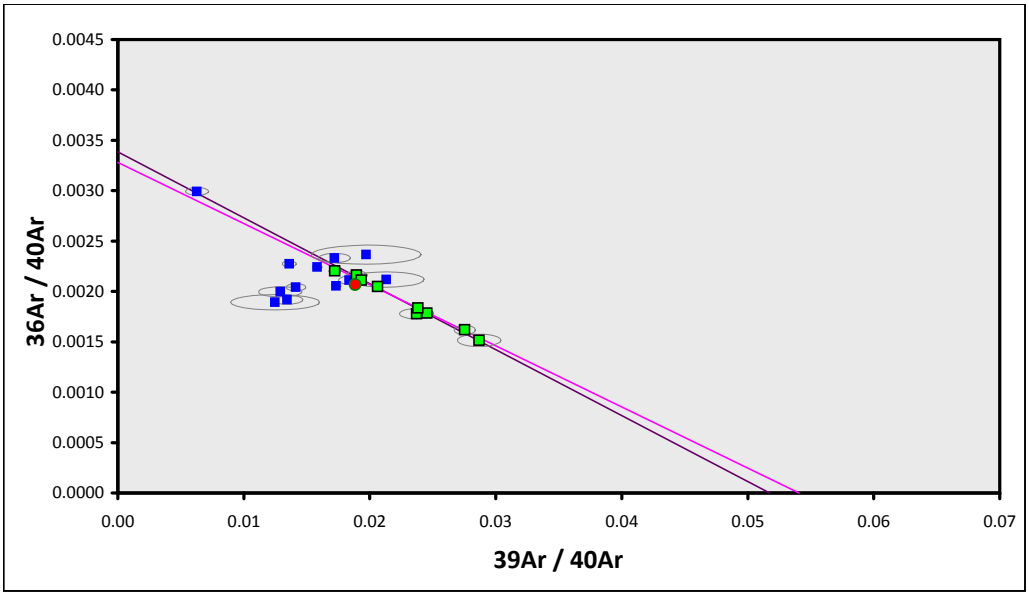
Information on Analysis and Constants Used in Calculations

Project = **MV1203 (13-INT-04)**
Sample = **MV1203-D14-05**
Material = **Plagioclase**
Location = **Bottlenose Seamount**
Region = **Walvis Ridge**
Analyst = **Susan Schnur**
Irradiation = **15-OSU-07 (7A22-15)**
Position = **X: 0 | Y: 0 | Z/H: 38.84 mm**
FCT-NM Age = **28.201 ± 0.023 Ma**
FCT-NM Reference = **Kuiper et al (2008)**
FCT-NM 40Ar/39Ar Ratio = **9.43709 ± 0.01425**
FCT-NM J-value = **0.00166549 ± 0.00000251**
Air Shot 40Ar/36Ar = **304.7380 ± 0.4144**
Air Shot MDF = **0.99241156 ± 0.00066327 (LIN)**
Experiment Type = **Incremental Heating**
Extraction Method = **Bulk Laser Heating**
Heating = **77 sec**
Isolation = **1.50 min**
Instrument = **ARGUS-VI-D**
Preferred Age = **Plateau Age**
Age Classification = **Eruption Age**
IGSN = **IESRS0070**
Rock Class = **Igneous>Volcanic>Mafic**
Lithology = **Basalt**
Lat-Lon = **30°48.4'S - 1°16.2'W**
Age Equations = **Min et al. (2000)**
Negative Intensities = **Allowed**
Collector Calibrations = **36Ar**
Decay 40K = **5.530 ± 0.048 E-10 1/a**
Decay 39Ar = **2.940 ± 0.016 E-07 1/h**
Decay 37Ar = **8.230 ± 0.012 E-04 1/h**
Decay 36Cl = **2.257 ± 0.015 E-06 1/a**
Decay 40K(EC,β^+) = **0.580 ± 0.009 E-10 1/a**
Decay 40K(β^-) = **4.950 ± 0.043 E-10 1/a**
Atmospheric 40/36(a) = **295.50**
Atmospheric 38/36(a) = **0.1869**
Production 39/37(ca) = **0.0006756 ± 0.0000089**
Production 38/37(ca) = **0.0000718 ± 0.0000092**
Production 36/37(ca) = **0.0002663 ± 0.0000004**
Production 40/39(k) = **0.003823 ± 0.000102**
Production 38/39(k) = **0.012031 ± 0.000019**
Production 36/38(cl) = **262.80 ± 1.71**
Scaling Ratio K/Ca = **0.430**
Abundance Ratio 40K/K = **1.1700 ± 0.0100 E-04**
Atomic Weight K = **39.0983 ± 0.0001 g**

Good plateau

Results	40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD	39Ar(k) (%,n)	K/Ca ± 2σ
Age Plateau		19.33270 ± 0.24402	**57.31 ± 0.73**	1.26	65.03	0.0013 ± 0.0001
		± 1.26%	**± 1.28%**	26%	9	
		Full External Error ± 1.48		2.00	2σ Confidence Limit	
		Analytical Error ± 0.71		1.1243	Error Magnification	
Total Fusion Age		20.65112 ± 0.20435	**61.15 ± 0.62**		21	0.0012 ± 0.0000
		± 0.99%	**± 1.02%**			
		Full External Error ± 1.50				
		Analytical Error ± 0.59				
Normal Isochron	**304.80 ± 10.55**	18.49583 ± 0.98140	**54.86 ± 2.87**	1.03	65.03	
	± 3.46%	± 5.31%	**± 5.23%**	41%	9	
		Full External Error ± 3.12		2.07	2σ Confidence Limit	
		Analytical Error ± 2.87		1.0136	Error Magnification	
Inverse Isochron	**304.91 ± 10.54**	18.49045 ± 0.98069	**54.85 ± 2.87**	1.03	65.03	
	± 3.46%	± 5.30%	**± 5.23%**	41%	9	
		Full External Error ± 3.12		2.07	2σ Confidence Limit	
		Analytical Error ± 2.87		1.0164	Error Magnification	
				21%	Spreading Factor	





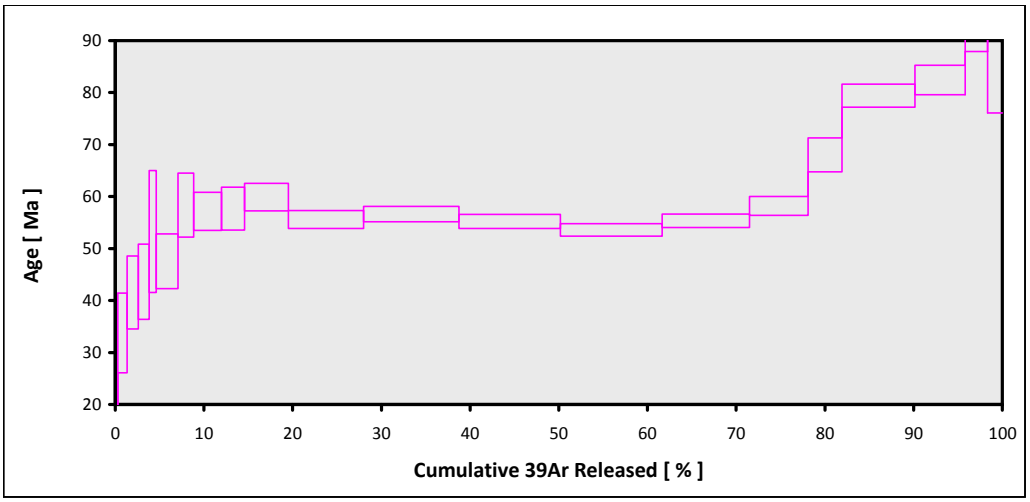
EXP#16D08540 > MV1203-D14-06 > Plagioclase > MV1203 (13-INT-04)
WALVIS RIDGE > BOTTLENOSE SEAMOUNT
15-OSU-07 (7A24-15) > Incremental Heating > Susan Schnur

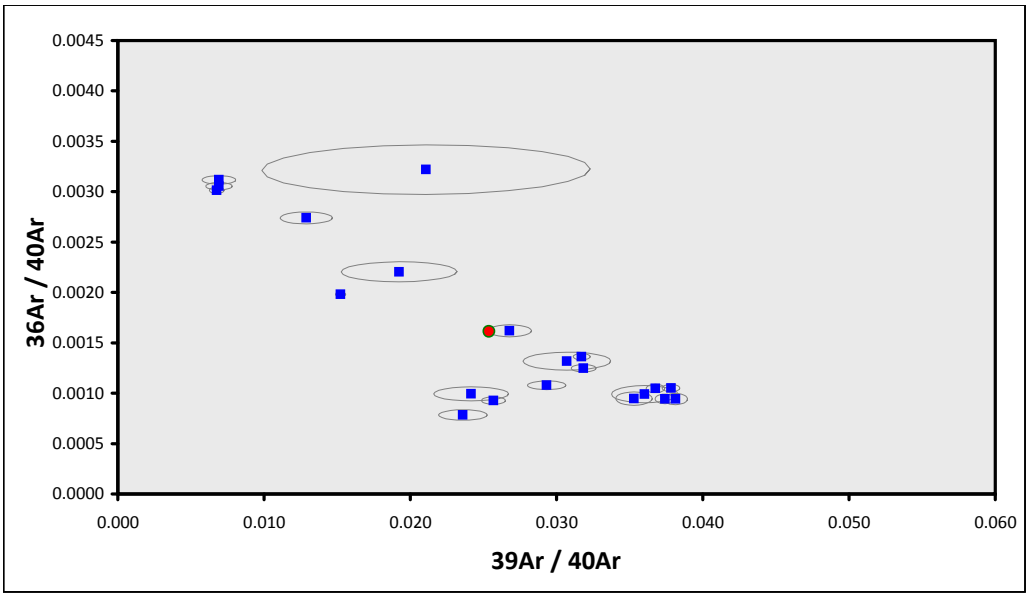
Information on Analysis and Constants Used in Calculations

Project = **MV1203 (13-INT-04)**
Sample = **MV1203-D14-06**
Material = **Plagioclase**
Location = **Bottlenose Seamount**
Region = **Walvis Ridge**
Analyst = **Susan Schnur**
Irradiation = **15-OSU-07 (7A24-15)**
Position = **X: 0 | Y: 0 | Z/H: 42.2 mm**
FCT-NM Age = **28.201 ± 0.023 Ma**
FCT-NM Reference = **Kuiper et al (2008)**
FCT-NM 40Ar/39Ar Ratio = **9.52413 ± 0.01419**
FCT-NM J-value = **0.00165027 ± 0.00000246**
Air Shot 40Ar/36Ar = **304.7450 ± 0.4175**
Air Shot MDF = **0.99240599 ± 0.00066447 (LIN)**
Experiment Type = **Incremental Heating**
Extraction Method = **Bulk Laser Heating**
Heating = **77 sec**
Isolation = **1.50 min**
Instrument = **ARGUS-VI-D**
Preferred Age = Undefined
Age Classification = Undefined
IGSN = **IESRS0071**
Rock Class = **Igneous>Volcanic>Mafic**
Lithology = **Basalt**
Lat-Lon = **30°48.4'S - 1°16.2'W**
Age Equations = **Min et al. (2000)**
Negative Intensities = **Allowed**
Collector Calibrations = **36Ar**
Decay 40K = **5.530 ± 0.048 E-10 1/a**
Decay 39Ar = **2.940 ± 0.016 E-07 1/h**
Decay 37Ar = **8.230 ± 0.012 E-04 1/h**
Decay 36Cl = **2.257 ± 0.015 E-06 1/a**
Decay 40K(EC,β^+) = **0.580 ± 0.009 E-10 1/a**
Decay 40K(β^-) = **4.950 ± 0.043 E-10 1/a**
Atmospheric 40/36(a) = **295.50**
Atmospheric 38/36(a) = **0.1869**
Production 39/37(ca) = **0.0006756 ± 0.0000089**
Production 38/37(ca) = **0.0000718 ± 0.0000092**
Production 36/37(ca) = **0.0002663 ± 0.0000004**
Production 40/39(k) = **0.003823 ± 0.000102**
Production 38/39(k) = **0.012031 ± 0.000019**
Production 36/38(cl) = **262.80 ± 1.71**
Scaling Ratio K/Ca = **0.430**
Abundance Ratio 40K/K = **1.1700 ± 0.0100 E-04**
Atomic Weight K = **39.0983 ± 0.0001 g**

Age drops slightly then rises at high-T, resulting in only a small low-T plateau.

Results	40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD	39Ar(k) (%,n)	K/Ca ± 2σ
Age Plateau						
Cannot Calculate						
Total Fusion Age		20.61616 ± 0.20445 ± 0.99%	**60.50 ± 0.62 ± 1.02%**		21	0.0012 ± 0.0000
			Full External Error ± 1.49			
			Analytical Error ± 0.59			
Normal Isochron						
Cannot Calculate						
Inverse Isochron						
Cannot Calculate						





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

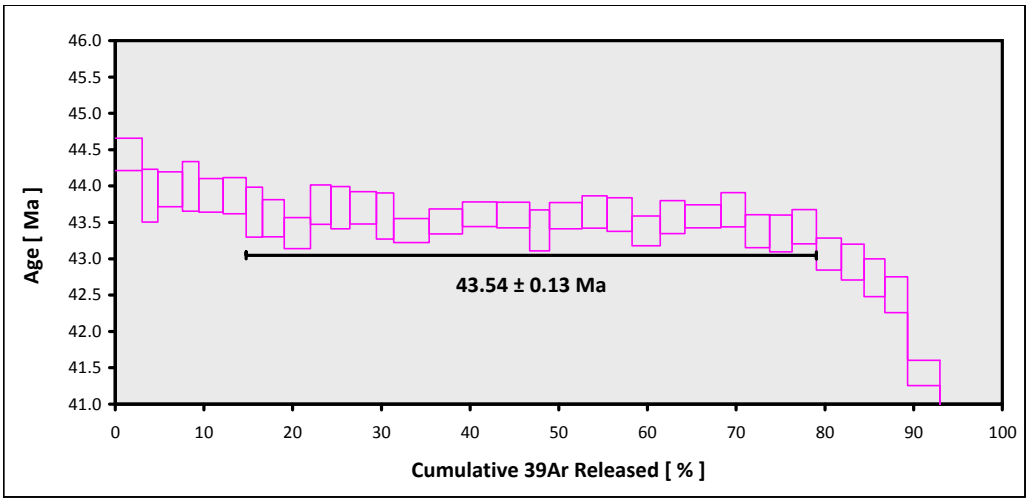
EXP#16D08652 > MV1203-D17-07 > Groundmass > MV1203 (13-INT-04)
WALVIS RIDGE > MAYHEW GUYOT
15-OSU-07 (7A35-15) > Incremental Heating > Susan Schnur

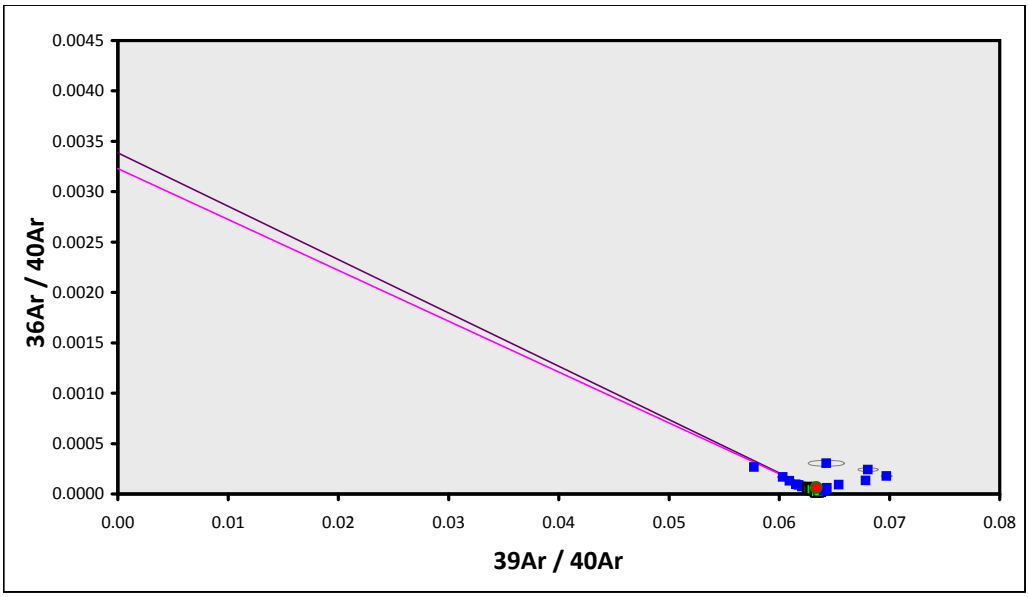
Information on Analysis and Constants Used in Calculations

Project = **MV1203 (13-INT-04)**
Sample = **MV1203-D17-07**
Material = **Groundmass**
Location = **Mayhew Guyot**
Region = **Walvis Ridge**
Analyst = **Susan Schnur**
Irradiation = **15-OSU-07 (7A35-15)**
Position = **X: 0 | Y: 0 | Z/H: 60.21 mm**
FCT-NM Age = **28.201 ± 0.023 Ma**
FCT-NM Reference = **Kuiper et al (2008)**
FCT-NM 40Ar/39Ar Ratio = **10.08695 ± 0.01422**
FCT-NM J-value = **0.00155819 ± 0.00000220**
Air Shot 40Ar/36Ar = **304.7430 ± 0.4145**
Air Shot MDF = **0.99240758 ± 0.00066326 (LIN)**
Experiment Type = **Incremental Heating**
Extraction Method = **Bulk Laser Heating**
Heating = **77 sec**
Isolation = **3.00 min**
Instrument = **ARGUS-VI-D**
Preferred Age = **Plateau Age**
Age Classification = **Eruption Age**
IGSN = **IESRS0072**
Rock Class = **Igneous>Volcanic>Mafic**
Lithology = **Basalt**
Lat-Lon = **32°06.5'S - 3°30.2'W**
Age Equations = **Min et al. (2000)**
Negative Intensities = **Allowed**
Collector Calibrations = **36Ar**
Decay 40K = **5.530 ± 0.048 E-10 1/a**
Decay 39Ar = **2.940 ± 0.016 E-07 1/h**
Decay 37Ar = **8.230 ± 0.012 E-04 1/h**
Decay 36Cl = **2.257 ± 0.015 E-06 1/a**
Decay 40K(EC,β^+) = **0.580 ± 0.009 E-10 1/a**
Decay 40K(β^-) = **4.950 ± 0.043 E-10 1/a**
Atmospheric 40/36(a) = **295.50**
Atmospheric 38/36(a) = **0.1869**
Production 39/37(ca) = **0.0006756 ± 0.0000089**
Production 38/37(ca) = **0.0000718 ± 0.0000092**
Production 36/37(ca) = **0.0002663 ± 0.0000004**
Production 40/39(k) = **0.003823 ± 0.000102**
Production 38/39(k) = **0.012031 ± 0.000019**
Production 36/38(cl) = **262.80 ± 1.71**
Scaling Ratio K/Ca = **0.430**
Abundance Ratio 40K/K = **1.1700 ± 0.0100 E-04**
Atomic Weight K = **39.0983 ± 0.0001 g**

A little bumpy, but plateau is otherwise Good.

Results	40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD	39Ar(k) (%,n)	K/Ca ± 2σ
Age Plateau		15.63971 ± 0.01838 (± 0.12%)	**43.54 ± 0.13 (± 0.30%)**	1.22	64.27	0.174 ± 0.006
		Full External Error ± 0.99		22%	22	
		Analytical Error ± 0.05		1.62	2σ Confidence Limit	
				1.1029	Error Magnification	
Total Fusion Age		15.48972 ± 0.01408 (± 0.09%)	**43.13 ± 0.13 (± 0.29%)**		37	0.095 ± 0.000
		Full External Error ± 0.98				
		Analytical Error ± 0.04				
Normal Isochron	**304.40 ± 108.31 (± 35.58%)**	15.63387 ± 0.05908 (± 0.38%)	**43.52 ± 0.20 (± 0.47%)**	1.28	64.27	
		Full External Error ± 1.00		18%	22	
		Analytical Error ± 0.16		1.63	2σ Confidence Limit	
				1.1303	Error Magnification	
Inverse Isochron	**309.48 ± 86.66 (± 28.00%)**	15.63282 ± 0.05871 (± 0.38%)	**43.52 ± 0.20 (± 0.46%)**	1.27	64.27	
Clustered Points		Full External Error ± 1.00		19%	22	
		Analytical Error ± 0.16		1.63	2σ Confidence Limit	
				1.1273	Error Magnification	
				2%	Spreading Factor	





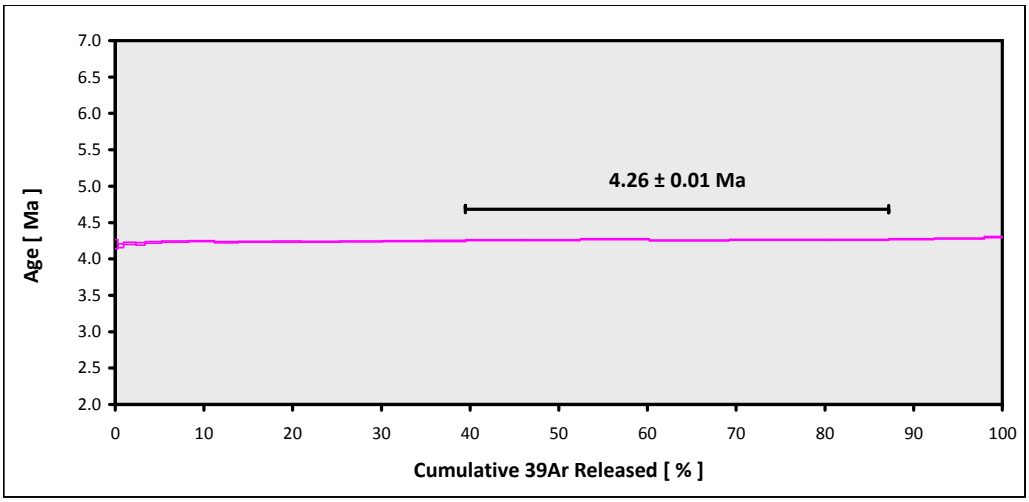
EXP#16D10436 > MV1203-D20B-06 > K-Feldspar > MV1203 (13-INT-04)
WALVIS RIDGE > HUMPBACK SEAMOUNT
15-OSU-07 (7A38-15) > Incremental Heating > Susan Schnur

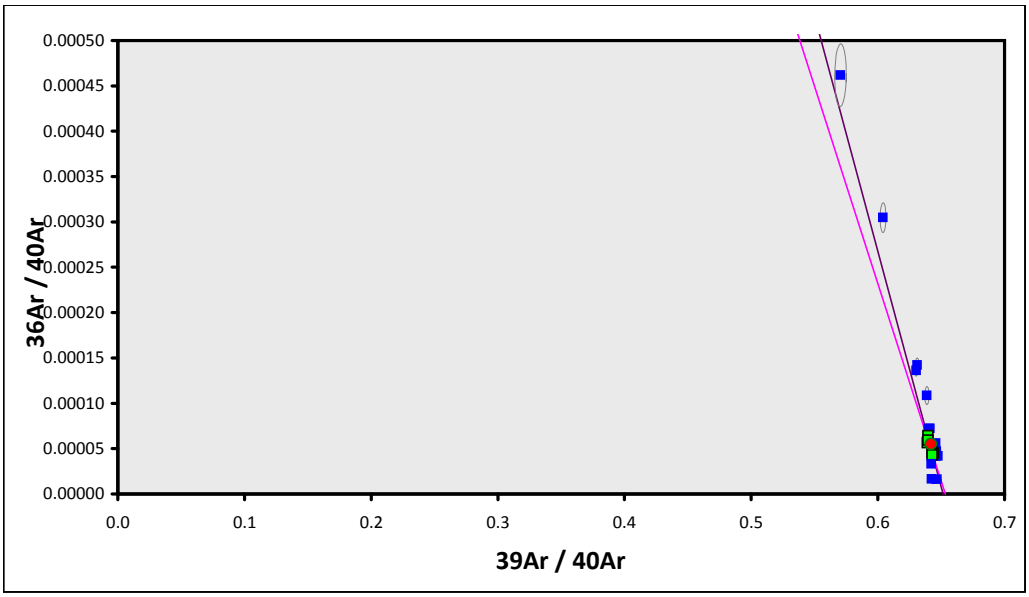
Information on Analysis and Constants Used in Calculations

Project = **MV1203 (13-INT-04)**
Sample = **MV1203-D20B-06**
Material = **K-Feldspar**
Location = **Humpback Seamount**
Region = **Walvis Ridge**
Analyst = **Susan Schnur**
Irradiation = **15-OSU-07 (7A38-15)**
Position = **X: 0 | Y: 0 | Z/H: 64 mm**
FCT-NM Age = **28.201 ± 0.023 Ma**
FCT-NM Reference = **Kuiper et al (2008)**
FCT-NM 40Ar/39Ar Ratio = **10.22605 ± 0.01421**
FCT-NM J-value = **0.00153700 ± 0.00000214**
Air Shot 40Ar/36Ar = **304.7500 ± 0.4175**
Air Shot MDF = **0.99240201 ± 0.00066446 (LIN)**
Experiment Type = **Incremental Heating**
Extraction Method = **Bulk Laser Heating**
Heating = **77 sec**
Isolation = **1.50 min**
Instrument = **ARGUS-VI-D**
Preferred Age = **Plateau Age**
Age Classification = **Eruption Age**
IGSN = **IESRS0073**
Rock Class = **Igneous>Volcanic>Mafic**
Lithology = **Phonolite**
Lat-Lon = **33°34.7'S - 2°23.9'W**
Age Equations = **Min et al. (2000)**
Negative Intensities = **Allowed**
Collector Calibrations = **36Ar**
Decay 40K = **5.530 ± 0.048 E-10 1/a**
Decay 39Ar = **2.940 ± 0.016 E-07 1/h**
Decay 37Ar = **8.230 ± 0.012 E-04 1/h**
Decay 36Cl = **2.257 ± 0.015 E-06 1/a**
Decay 40K(EC,β^+) = **0.580 ± 0.009 E-10 1/a**
Decay 40K(β^-) = **4.950 ± 0.043 E-10 1/a**
Atmospheric 40/36(a) = **295.50**
Atmospheric 38/36(a) = **0.1869**
Production 39/37(ca) = **0.0006756 ± 0.0000089**
Production 38/37(ca) = **0.0000718 ± 0.0000092**
Production 36/37(ca) = **0.0002663 ± 0.0000004**
Production 40/39(k) = **0.003823 ± 0.000102**
Production 38/39(k) = **0.012031 ± 0.000019**
Production 36/38(cl) = **262.80 ± 1.71**
Scaling Ratio K/Ca = **0.430**
Abundance Ratio 40K/K = **1.1700 ± 0.0100 E-04**
Atomic Weight K = **39.0983 ± 0.0001 g**

Plateau region slants upwards, two small plateaus at low and high-T.

Results	40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD	39Ar(k) (%,n)	K/Ca ± 2σ
Age Plateau		1.53508 ± 0.00172	**4.26 ± 0.01**	3.33	47.70	67 ± 5
Error Mean		± 0.11%	**± 0.30%**	1%	6	
			Full External Error ± 0.10	2.26	2σ Confidence Limit	
			Analytical Error ± 0.00	1.8245	Error Magnification	
Total Fusion Age		1.53235 ± 0.00061	**4.25 ± 0.01**		23	69 ± 5
		± 0.04%	**± 0.28%**			
			Full External Error ± 0.10			
			Analytical Error ± 0.00			
Normal Isochron	**347.31 ± 143.32**	1.53081 ± 0.01181	**4.25 ± 0.03**	3.60	47.70	
Error Chron	**± 41.27%**	± 0.77%	**± 0.82%**	1%	6	
			Full External Error ± 0.10	2.41	2σ Confidence Limit	
			Analytical Error ± 0.03	1.8967	Error Magnification	
Inverse Isochron	**351.60 ± 137.57**	1.53053 ± 0.01192	**4.25 ± 0.04**	3.63	47.70	
Error Chron	**± 39.13%**	± 0.78%	**± 0.83%**	1%	6	
			Full External Error ± 0.10	2.41	2σ Confidence Limit	
			Analytical Error ± 0.03	1.9044	Error Magnification	
				1%	Spreading Factor	





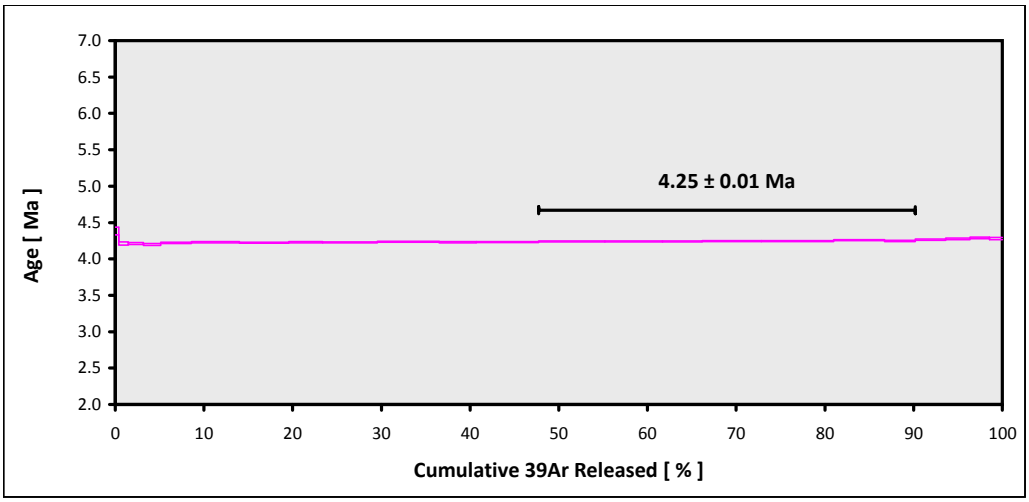
EXP#16D10472 > MV1203-D20B-05 > K-Feldspar > MV1203 (13-INT-04)
WALVIS RIDGE > HUMPBACK SEAMOUNT
15-OSU-07 (7A36-15) > Incremental Heating > Susan Schnur

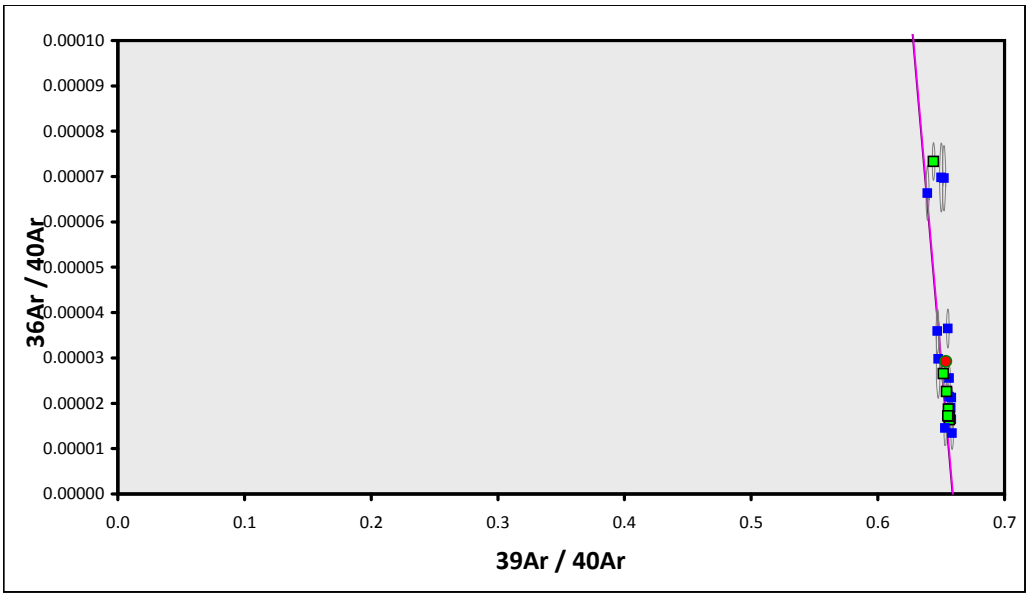
Information on Analysis and Constants Used in Calculations

Project = **MV1203 (13-INT-04)**
Sample = **MV1203-D20B-05**
Material = **K-Feldspar**
Location = **Humpback Seamount**
Region = **Walvis Ridge**
Analyst = **Susan Schnur**
Irradiation = **15-OSU-07 (7A36-15)**
Position = **X: 0 | Y: 0 | Z/H: 61.97 mm**
FCT-NM Age = **28.201 ± 0.023 Ma**
FCT-NM Reference = **Kuiper et al (2008)**
FCT-NM 40Ar/39Ar Ratio = **10.15065 ± 0.01421**
FCT-NM J-value = **0.00154841 ± 0.00000217**
Air Shot 40Ar/36Ar = **304.7490 ± 0.4175**
Air Shot MDF = **0.99240280 ± 0.00066446 (LIN)**
Experiment Type = **Incremental Heating**
Extraction Method = **Bulk Laser Heating**
Heating = **77 sec**
Isolation = **1.50 min**
Instrument = **ARGUS-VI-D**
Preferred Age = **Plateau Age**
Age Classification = **Eruption Age**
IGSN = **IESRS0074**
Rock Class = **Igneous>Volcanic>Mafic**
Lithology = **Phonolite**
Lat-Lon = **33°34.7'S - 2°23.9'W**
Age Equations = **Min et al. (2000)**
Negative Intensities = **Allowed**
Collector Calibrations = **36Ar**
Decay 40K = **5.530 ± 0.048 E-10 1/a**
Decay 39Ar = **2.940 ± 0.016 E-07 1/h**
Decay 37Ar = **8.230 ± 0.012 E-04 1/h**
Decay 36Cl = **2.257 ± 0.015 E-06 1/a**
Decay 40K(EC,β^+) = **0.580 ± 0.009 E-10 1/a**
Decay 40K(β^-) = **4.950 ± 0.043 E-10 1/a**
Atmospheric 40/36(a) = **295.50**
Atmospheric 38/36(a) = **0.1869**
Production 39/37(ca) = **0.0006756 ± 0.0000089**
Production 38/37(ca) = **0.0000718 ± 0.0000092**
Production 36/37(ca) = **0.0002663 ± 0.0000004**
Production 40/39(k) = **0.003823 ± 0.000102**
Production 38/39(k) = **0.012031 ± 0.000019**
Production 36/38(cl) = **262.80 ± 1.71**
Scaling Ratio K/Ca = **0.430**
Abundance Ratio 40K/K = **1.1700 ± 0.0100 E-04**
Atomic Weight K = **39.0983 ± 0.0001 g**

Slight upward slant with low and high-T plateaus. High-T plateau selected in this case.

Results	40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD	39Ar(k) (%,n)	K/Ca ± 2σ
Age Plateau		1.51796 ± 0.00171	**4.25 ± 0.01**	3.32	42.43	67 ± 6
Error Mean		± 0.11%	**± 0.30%**	0%	7	
		Full External Error ± 0.10		2.15	2σ Confidence Limit	
		Analytical Error ± 0.00		1.8233	Error Magnification	
Total Fusion Age		1.51612 ± 0.00061	**4.24 ± 0.01**		23	70 ± 5
		± 0.04%	**± 0.28%**			
		Full External Error ± 0.10				
		Analytical Error ± 0.00				
Normal Isochron	**363.41 ± 75.99**	1.51464 ± 0.00345	**4.24 ± 0.02**	3.68	42.43	
Error Chron	**± 20.91%**	± 0.23%	**± 0.36%**	0%	7	
		Full External Error ± 0.10		2.26	2σ Confidence Limit	
		Analytical Error ± 0.01		1.9184	Error Magnification	
Inverse Isochron	**332.85 ± 69.95**	1.51655 ± 0.00318	**4.24 ± 0.01**	3.25	42.43	
Error Chron	**± 21.01%**	± 0.21%	**± 0.35%**	1%	7	
		Full External Error ± 0.10		2.26	2σ Confidence Limit	
		Analytical Error ± 0.01		1.8020	Error Magnification	
				2%	Spreading Factor	





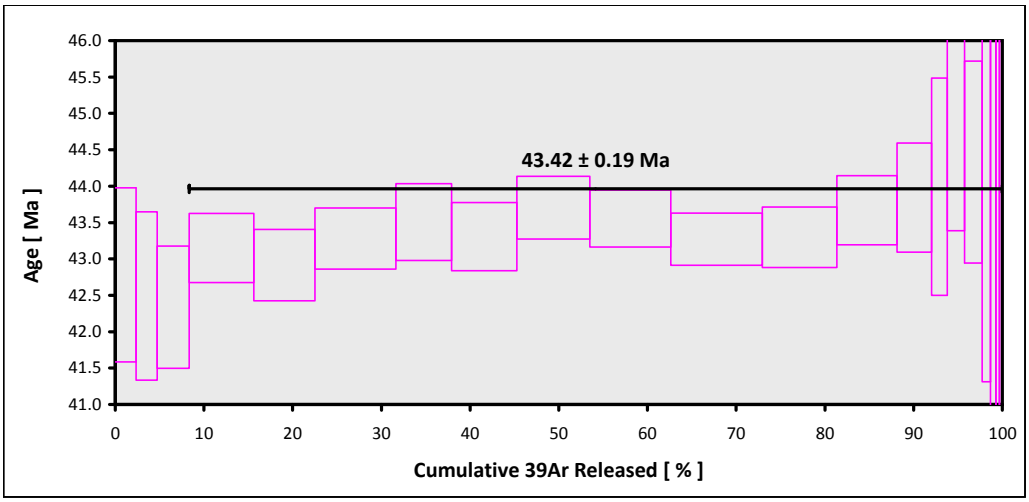
EXP#16D10508 > MV1203-D17-06 > Plagioclase > MV1203 (13-INT-04)
WALVIS RIDGE > MAYHEW GUYOT
15-OSU-07 (7A34-15) > Incremental Heating > Susan Schnur

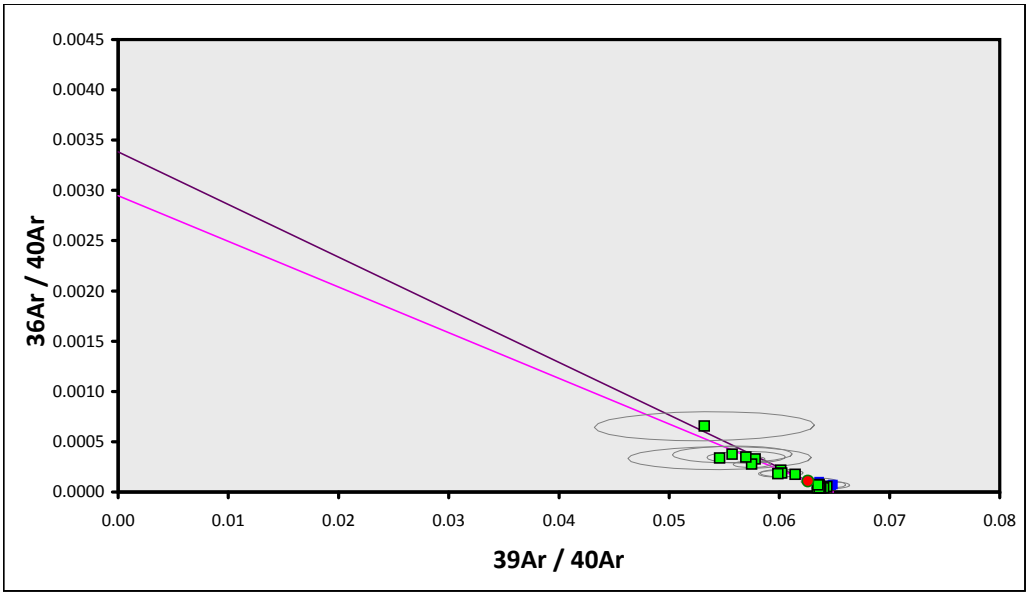
Information on Analysis and Constants Used in Calculations

Project = **MV1203 (13-INT-04)**
Sample = **MV1203-D17-06**
Material = **Plagioclase**
Location = **Mayhew Guyot**
Region = **Walvis Ridge**
Analyst = **Susan Schnur**
Irradiation = **15-OSU-07 (7A34-15)**
Position = **X: 0 | Y: 0 | Z/H: 57.99 mm**
FCT-NM Age = **28.201 ± 0.023 Ma**
FCT-NM Reference = **Kuiper et al (2008)**
FCT-NM 40Ar/39Ar Ratio = **10.00881 ± 0.01421**
FCT-NM J-value = **0.00157036 ± 0.00000223**
Air Shot 40Ar/36Ar = **304.7490 ± 0.4175**
Air Shot MDF = **0.99240280 ± 0.00066446 (LIN)**
Experiment Type = **Incremental Heating**
Extraction Method = **Bulk Laser Heating**
Heating = **77 sec**
Isolation = **1.50 min**
Instrument = **ARGUS-VI-D**
Preferred Age = **Plateau Age**
Age Classification = **Eruption Age**
IGSN = **IESRS0075**
Rock Class = **Igneous>Volcanic>Mafic**
Lithology = **Basalt**
Lat-Lon = **32°06.5'S - 3°30.2'W**
Age Equations = **Min et al. (2000)**
Negative Intensities = **Allowed**
Collector Calibrations = **36Ar**
Decay 40K = **5.530 ± 0.048 E-10 1/a**
Decay 39Ar = **2.940 ± 0.016 E-07 1/h**
Decay 37Ar = **8.230 ± 0.012 E-04 1/h**
Decay 36Cl = **2.257 ± 0.015 E-06 1/a**
Decay 40K(EC,β^+) = **0.580 ± 0.009 E-10 1/a**
Decay 40K(β^-) = **4.950 ± 0.043 E-10 1/a**
Atmospheric 40/36(a) = **295.50**
Atmospheric 38/36(a) = **0.1869**
Production 39/37(ca) = **0.0006756 ± 0.0000089**
Production 38/37(ca) = **0.0000718 ± 0.0000092**
Production 36/37(ca) = **0.0002663 ± 0.0000004**
Production 40/39(k) = **0.003823 ± 0.000102**
Production 38/39(k) = **0.012031 ± 0.000019**
Production 36/38(cl) = **262.80 ± 1.71**
Scaling Ratio K/Ca = **0.430**
Abundance Ratio 40K/K = **1.1700 ± 0.0100 E-04**
Atomic Weight K = **39.0983 ± 0.0001 g**

Good plateau

Results	40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD	39Ar(k) (%,n)	K/Ca ± 2σ
Age Plateau		15.47366 ± 0.05158	**43.42 ± 0.19**	1.14	91.68	0.0042 ± 0.0002
		± 0.33%	**± 0.43%**	31%	18	
		Full External Error ± 0.99		1.69	2σ Confidence Limit	
		Analytical Error ± 0.14		1.0678	Error Magnification	
Total Fusion Age		15.46669 ± 0.05193	**43.40 ± 0.19**		21	0.0043 ± 0.0000
		± 0.34%	**± 0.43%**			
		Full External Error ± 0.99				
		Analytical Error ± 0.14				
Normal Isochron	**321.15 ± 38.04**	15.43759 ± 0.07664	**43.32 ± 0.24**	0.99	91.68	
	± 11.84%	± 0.50%	**± 0.57%**	46%	18	
		Full External Error ± 1.00		1.71	2σ Confidence Limit	
		Analytical Error ± 0.21		1.0000	Error Magnification	
Inverse Isochron	**339.33 ± 38.00**	15.40940 ± 0.07784	**43.24 ± 0.25**	0.90	91.68	
	± 11.20%	± 0.51%	**± 0.57%**	57%	18	
		Full External Error ± 1.00		1.71	2σ Confidence Limit	
		Analytical Error ± 0.22		1.0000	Error Magnification	
				17%	Spreading Factor	





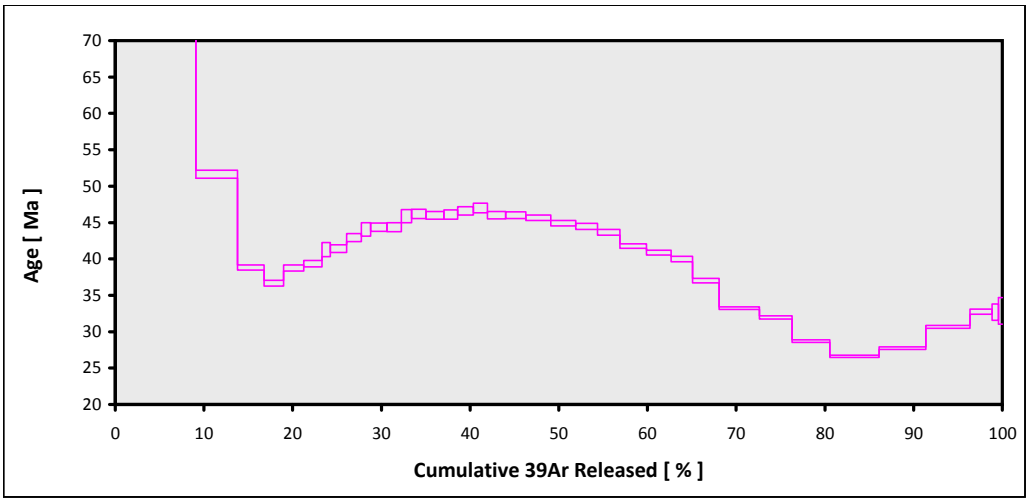
EXP#16D10572 > MV1203-D12-02 > Groundmass > MV1203 (13-INT-04)
WALVIS RIDGE > NARWHAL SEAMOUNT
15-OSU-07 (7A19-15) > Incremental Heating > Susan Schnur

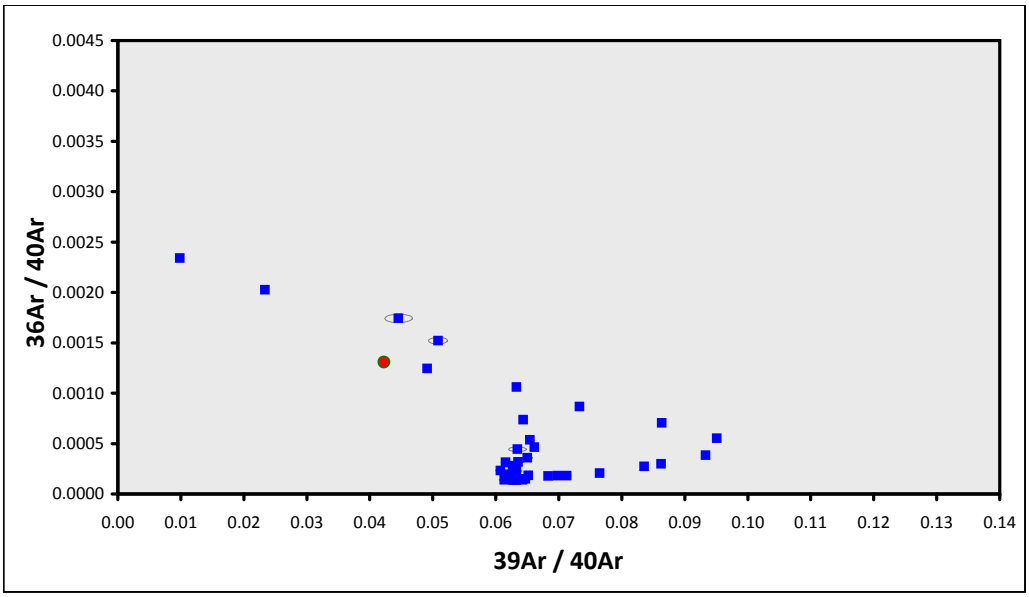
Information on Analysis and Constants Used in Calculations

Project = **MV1203 (13-INT-04)**
Sample = **MV1203-D12-02**
Material = **Groundmass**
Location = **Narwhal Seamount**
Region = **Walvis Ridge**
Analyst = **Susan Schnur**
Irradiation = **15-OSU-07 (7A19-15)**
Position = **X: 0 | Y: 0 | Z/H: 34.24 mm**
FCT-NM Age = **28.201 ± 0.023 Ma**
FCT-NM Reference = **Kuiper et al (2008)**
FCT-NM 40Ar/39Ar Ratio = **9.32707 ± 0.01427**
FCT-NM J-value = **0.00168514 ± 0.00000258**
Air Shot 40Ar/36Ar = **304.7280 ± 0.4236**
Air Shot MDF = **0.99241953 ± 0.00066695 (LIN)**
Experiment Type = **Incremental Heating**
Extraction Method = **Bulk Laser Heating**
Heating = **77 sec**
Isolation = **3.00 min**
Instrument = **ARGUS-VI-D**
Preferred Age = Undefined
Age Classification = Undefined
IGSN = **IESRS0076**
Rock Class = **Igneous>Volcanic>Mafic**
Lithology = **Basalt**
Lat-Lon = **30°42.5'S - 0°18.9'W**
Age Equations = **Min et al. (2000)**
Negative Intensities = **Allowed**
Collector Calibrations = **36Ar**
Decay 40K = **5.530 ± 0.048 E-10 1/a**
Decay 39Ar = **2.940 ± 0.016 E-07 1/h**
Decay 37Ar = **8.230 ± 0.012 E-04 1/h**
Decay 36Cl = **2.257 ± 0.015 E-06 1/a**
Decay 40K(EC,β^+) = **0.580 ± 0.009 E-10 1/a**
Decay 40K(β^-) = **4.950 ± 0.043 E-10 1/a**
Atmospheric 40/36(a) = **295.50**
Atmospheric 38/36(a) = **0.1869**
Production 39/37(ca) = **0.0006756 ± 0.0000089**
Production 38/37(ca) = **0.0000718 ± 0.0000092**
Production 36/37(ca) = **0.0002663 ± 0.0000004**
Production 40/39(k) = **0.003823 ± 0.000102**
Production 38/39(k) = **0.012031 ± 0.000019**
Production 36/38(cl) = **262.80 ± 1.71**
Scaling Ratio K/Ca = **0.430**
Abundance Ratio 40K/K = **1.1700 ± 0.0100 E-04**
Atomic Weight K = **39.0983 ± 0.0001 g**

Plateau steps are highly variable, tiny plateau at mid-T might be correct, but unreliable.

Results	40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD	39Ar(k) (%,n)	K/Ca ± 2σ
Age Plateau						
Cannot Calculate						
Total Fusion Age		14.51721 ± 0.04251 ± 0.29%	**43.71 ± 0.18 ± 0.42%**		37	0.0433 ± 0.0001
			Full External Error ± 1.00			
			Analytical Error ± 0.13			
Normal Isochron						
Cannot Calculate						
Inverse Isochron						
Cannot Calculate						





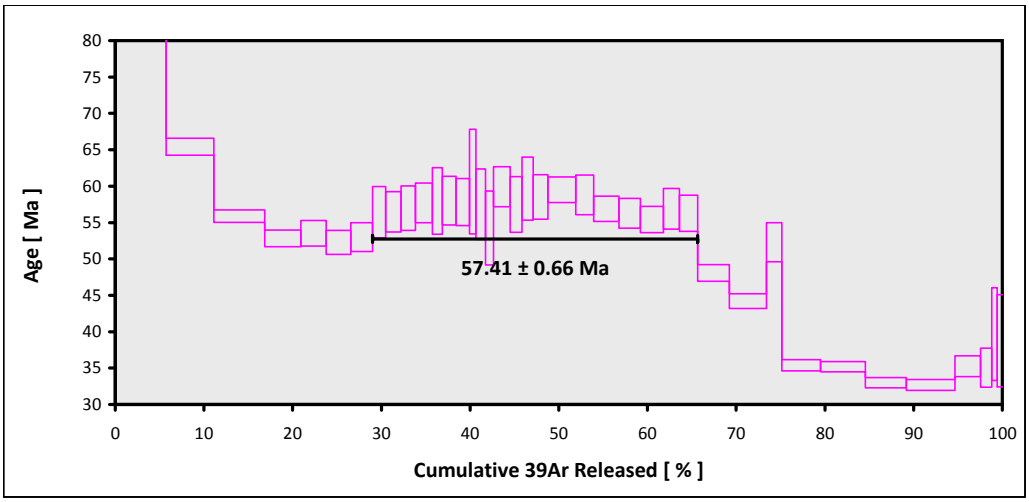
EXP#16D10626 > MV1203-D14-06 > Groundmass > MV1203 (13-INT-04)
WALVIS RIDGE > BOTTLENOSE SEAMOUNT
15-OSU-07 (7A23-15) > Incremental Heating > Susan Schnur

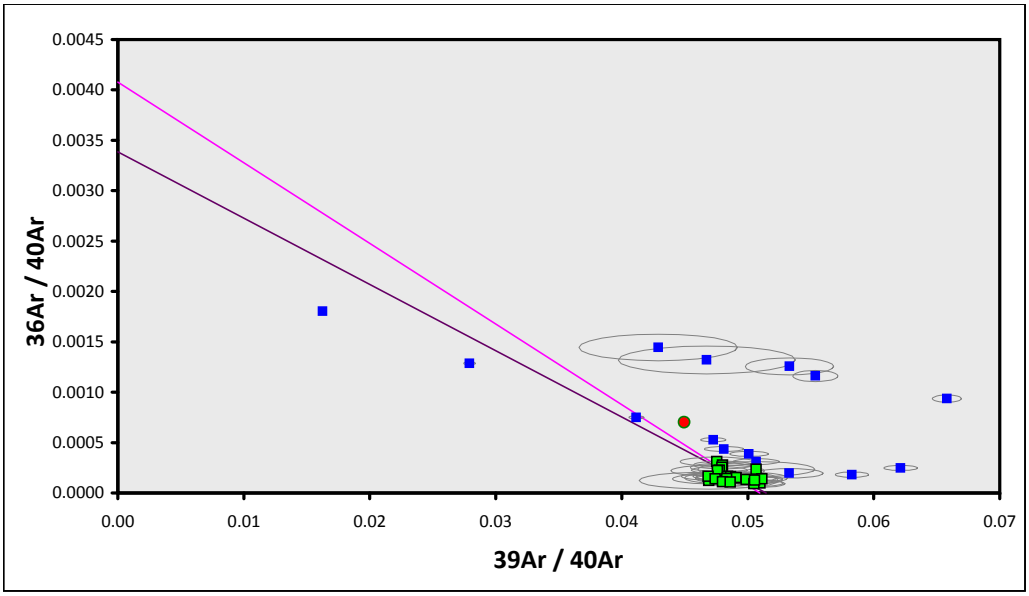
Information on Analysis and Constants Used in Calculations

Project = **MV1203 (13-INT-04)**
Sample = **MV1203-D14-06**
Material = **Groundmass**
Location = **Bottlenose Seamount**
Region = **Walvis Ridge**
Analyst = **Susan Schnur**
Irradiation = **15-OSU-07 (7A23-15)**
Position = **X: 0 | Y: 0 | Z/H: 40.16 mm**
FCT-NM Age = **28.201 ± 0.023 Ma**
FCT-NM Reference = **Kuiper et al (2008)**
FCT-NM 40Ar/39Ar Ratio = **9.47061 ± 0.01421**
FCT-NM J-value = **0.00165960 ± 0.00000249**
Air Shot 40Ar/36Ar = **304.7150 ± 0.4266**
Air Shot MDF = **0.99242989 ± 0.00066821 (LIN)**
Experiment Type = **Incremental Heating**
Extraction Method = **Bulk Laser Heating**
Heating = **77 sec**
Isolation = **3.00 min**
Instrument = **ARGUS-VI-D**
Preferred Age = **Plateau Age**
Age Classification = **Eruption Age**
IGSN = **IESRS0077**
Rock Class = **Igneous>Volcanic>Mafic**
Lithology = **Basalt**
Lat-Lon = **30°48.4'S - 1°16.2'W**
Age Equations = **Min et al. (2000)**
Negative Intensities = **Allowed**
Collector Calibrations = **36Ar**
Decay 40K = **5.530 ± 0.048 E-10 1/a**
Decay 39Ar = **2.940 ± 0.016 E-07 1/h**
Decay 37Ar = **8.230 ± 0.012 E-04 1/h**
Decay 36Cl = **2.257 ± 0.015 E-06 1/a**
Decay 40K(EC,β^+) = **0.580 ± 0.009 E-10 1/a**
Decay 40K(β^-) = **4.950 ± 0.043 E-10 1/a**
Atmospheric 40/36(a) = **295.50**
Atmospheric 38/36(a) = **0.1869**
Production 39/37(ca) = **0.0006756 ± 0.0000089**
Production 38/37(ca) = **0.0000718 ± 0.0000092**
Production 36/37(ca) = **0.0002663 ± 0.0000004**
Production 40/39(k) = **0.003823 ± 0.000102**
Production 38/39(k) = **0.012031 ± 0.000019**
Production 36/38(cl) = **262.80 ± 1.71**
Scaling Ratio K/Ca = **0.430**
Abundance Ratio 40K/K = **1.1700 ± 0.0100 E-04**
Atomic Weight K = **39.0983 ± 0.0001 g**

Low and high T steps are variable, but mid-T yields a small but acceptable plateau.

Results	40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD	39Ar(k) (%,n)	K/Ca ± 2σ
Age Plateau		19.43744 ± 0.21948 ± 1.13%	**57.41 ± 0.66** **± 1.15%**	1.13 31%	36.63 21	0.0099 ± 0.0009
		Full External Error ± 1.45		1.63	2σ Confidence Limit	
		Analytical Error ± 0.64		1.0629	Error Magnification	
Total Fusion Age		17.63018 ± 0.10224 ± 0.58%	**52.15 ± 0.34** **± 0.64%**		39	0.0090 ± 0.0001
		Full External Error ± 1.22				
		Analytical Error ± 0.30				
Normal Isochron	**263.95 ± 183.01** **± 69.33%**	19.51851 ± 0.61648 ± 3.16%	**57.65 ± 1.80** **± 3.12%**	1.13 31%	36.63 21	
		Full External Error ± 2.22		1.65	2σ Confidence Limit	
		Analytical Error ± 1.79		1.0624	Error Magnification	
Inverse Isochron	**245.21 ± 97.00** **± 39.56%**	19.62963 ± 0.62891 ± 3.20%	**57.97 ± 1.84** **± 3.17%**	1.19 26%	36.63 21	
		Full External Error ± 2.25		1.65	2σ Confidence Limit	
		Analytical Error ± 1.83		1.0891	Error Magnification	
				8%	Spreading Factor	





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

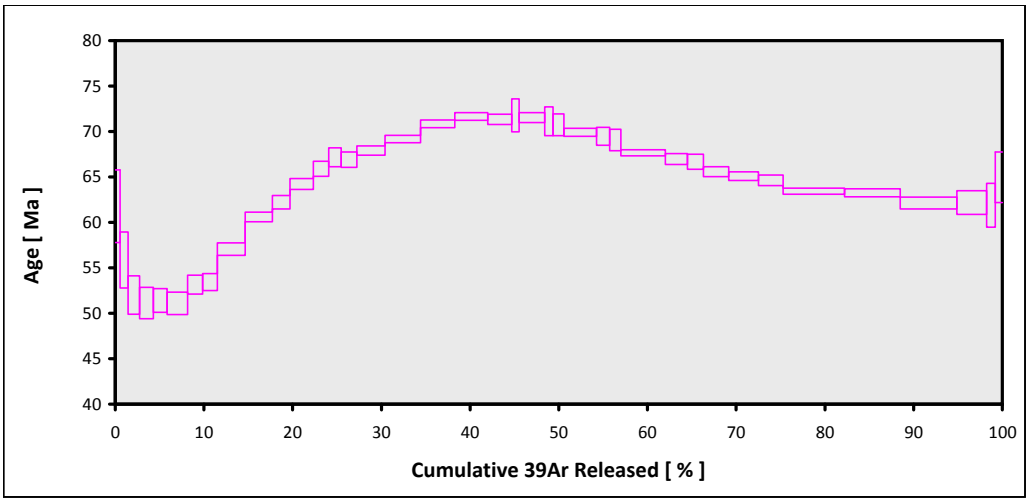
EXP#16D10683 > MV1203-D15-01 > Groundmass > MV1203 (13-INT-04)
WALVIS RIDGE > BULKINGTON EAST
15-OSU-07 (7A26-15) > Incremental Heating > Susan Schnur

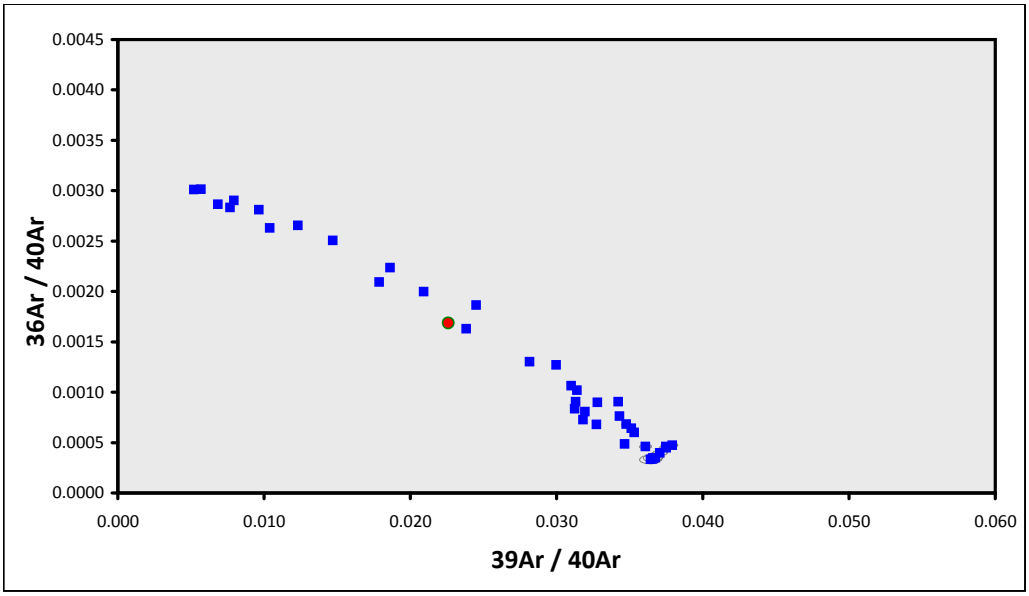
Information on Analysis and Constants Used in Calculations

Project = **MV1203 (13-INT-04)**
Sample = **MV1203-D15-01**
Material = **Groundmass**
Location = **Bulkington East**
Region = **Walvis Ridge**
Analyst = **Susan Schnur**
Irradiation = **15-OSU-07 (7A26-15)**
Position = **X: 0 | Y: 0 | Z/H: 45.29 mm**
FCT-NM Age = **28.201 ± 0.023 Ma**
FCT-NM Reference = **Kuiper et al (2008)**
FCT-NM 40Ar/39Ar Ratio = **9.60917 ± 0.01422**
FCT-NM J-value = **0.00163567 ± 0.00000242**
Air Shot 40Ar/36Ar = **304.7180 ± 0.4266**
Air Shot MDF = **0.99242750 ± 0.00066820 (LIN)**
Experiment Type = **Incremental Heating**
Extraction Method = **Bulk Laser Heating**
Heating = **77 sec**
Isolation = **3.00 min**
Instrument = **ARGUS-VI-D**
Preferred Age = Undefined
Age Classification = Undefined
IGSN = **IESRS0078**
Rock Class = **Igneous>Volcanic>Mafic**
Lithology = **Basaltic-Trachyandesite**
Lat-Lon = **31°17.1'S - 1°12.2'W**
Age Equations = **Min et al. (2000)**
Negative Intensities = **Allowed**
Collector Calibrations = **36Ar**
Decay 40K = **5.530 ± 0.048 E-10 1/a**
Decay 39Ar = **2.940 ± 0.016 E-07 1/h**
Decay 37Ar = **8.230 ± 0.012 E-04 1/h**
Decay 36Cl = **2.257 ± 0.015 E-06 1/a**
Decay 40K(EC,β^+) = **0.580 ± 0.009 E-10 1/a**
Decay 40K(β^-) = **4.950 ± 0.043 E-10 1/a**
Atmospheric 40/36(a) = **295.50**
Atmospheric 38/36(a) = **0.1869**
Production 39/37(ca) = **0.0006756 ± 0.0000089**
Production 38/37(ca) = **0.0000718 ± 0.0000092**
Production 36/37(ca) = **0.0002663 ± 0.0000004**
Production 40/39(k) = **0.003823 ± 0.000102**
Production 38/39(k) = **0.012031 ± 0.000019**
Production 36/38(cl) = **262.80 ± 1.71**
Scaling Ratio K/Ca = **0.430**
Abundance Ratio 40K/K = **1.1700 ± 0.0100 E-04**
Atomic Weight K = **39.0983 ± 0.0001 g**

Steps form wavy shape, no clear plateau, K/Ca indicates alteration.

Results	40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD	39Ar(k) (%,n)	K/Ca ± 2σ
Age Plateau						
Cannot Calculate						
Total Fusion Age		22.19734 ± 0.04509 ± 0.20%	**64.49 ± 0.23 ± 0.35%**		39	0.339 ± 0.002
			Full External Error ± 1.46			
			Analytical Error ± 0.13			
Normal Isochron						
Cannot Calculate						
Inverse Isochron						
Cannot Calculate						





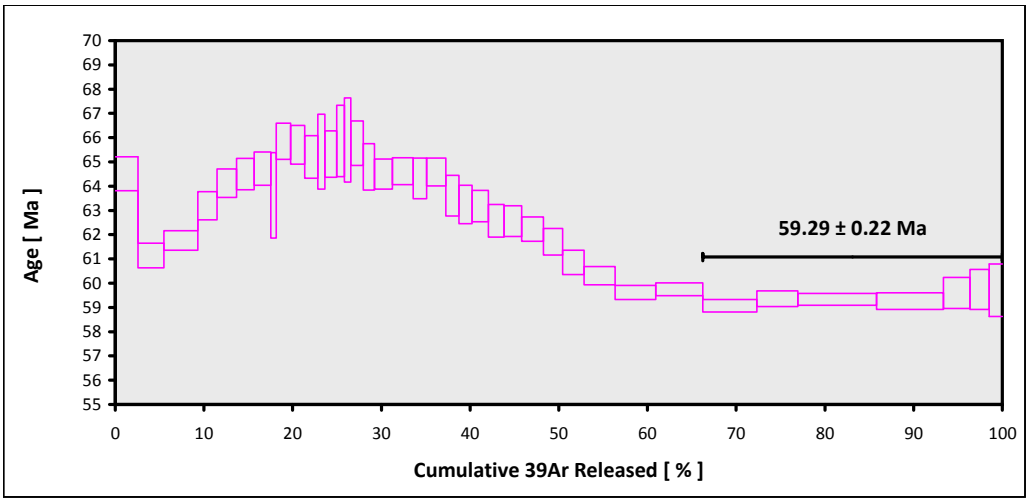
EXP#16D10771 > MV1203-D16-03 > Groundmass > MV1203 (13-INT-04)
WALVIS RIDGE > BULKINGTON WEST
15-OSU-07 (7A28-15) > Incremental Heating > Susan Schnur

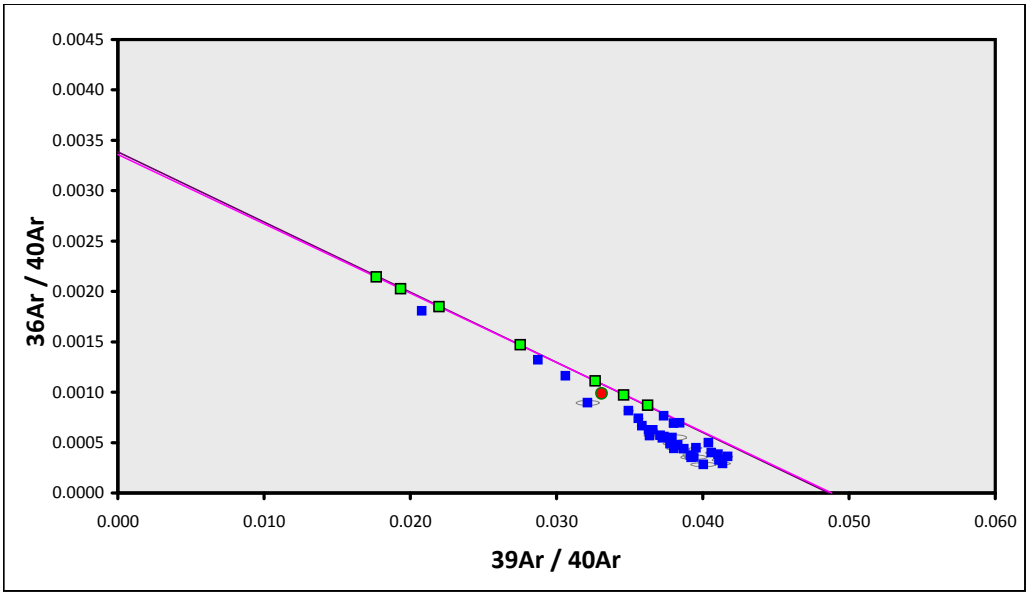
Information on Analysis and Constants Used in Calculations

Project = **MV1203 (13-INT-04)**
Sample = **MV1203-D16-03**
Material = **Groundmass**
Location = **Bulkington West**
Region = **Walvis Ridge**
Analyst = **Susan Schnur**
Irradiation = **15-OSU-07 (7A28-15)**
Position = **X: 0 | Y: 0 | Z/H: 48.35 mm**
FCT-NM Age = **28.201 ± 0.023 Ma**
FCT-NM Reference = **Kuiper et al (2008)**
FCT-NM 40Ar/39Ar Ratio = **9.69809 ± 0.01426**
FCT-NM J-value = **0.00162067 ± 0.00000238**
Air Shot 40Ar/36Ar = **304.7190 ± 0.4297**
Air Shot MDF = **0.99242670 ± 0.00066944 (LIN)**
Experiment Type = **Incremental Heating**
Extraction Method = **Bulk Laser Heating**
Heating = **77 sec**
Isolation = **3.00 min**
Instrument = **ARGUS-VI-D**
Preferred Age = **Inverse Isochron**
Age Classification = **Eruption Age**
IGSN = **IESRS0079**
Rock Class = **Igneous>Volcanic>Mafic**
Lithology = **Basalt**
Lat-Lon = **31°31.3'S - 1°56.9'W**
Age Equations = **Min et al. (2000)**
Negative Intensities = **Allowed**
Collector Calibrations = **36Ar**
Decay 40K = **5.530 ± 0.048 E-10 1/a**
Decay 39Ar = **2.940 ± 0.016 E-07 1/h**
Decay 37Ar = **8.230 ± 0.012 E-04 1/h**
Decay 36Cl = **2.257 ± 0.015 E-06 1/a**
Decay 40K(EC,β^+) = **0.580 ± 0.009 E-10 1/a**
Decay 40K(β^-) = **4.950 ± 0.043 E-10 1/a**
Atmospheric 40/36(a) = **295.50**
Atmospheric 38/36(a) = **0.1869**
Production 39/37(ca) = **0.0006756 ± 0.0000089**
Production 38/37(ca) = **0.0000718 ± 0.0000092**
Production 36/37(ca) = **0.0002663 ± 0.0000004**
Production 40/39(k) = **0.003823 ± 0.000102**
Production 38/39(k) = **0.012031 ± 0.000019**
Production 36/38(cl) = **262.80 ± 1.71**
Scaling Ratio K/Ca = **0.430**
Abundance Ratio 40K/K = **1.1700 ± 0.0100 E-04**
Atomic Weight K = **39.0983 ± 0.0001 g**

Low-T is variable but high-T yields a small plateau. Isochron intercept is Good.

Results	40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD	39Ar(k) (%,n)	K/Ca ± 2σ
Age Plateau		20.56447 ± 0.04809	**59.29 ± 0.22**	0.98	33.78	0.020 ± 0.012
		± 0.23%	**± 0.37%**	44%	7	
		Full External Error ± 1.35		2.15	2σ Confidence Limit	
		Analytical Error ± 0.14		1.0000	Error Magnification	
Total Fusion Age		21.40873 ± 0.03109	**61.68 ± 0.20**		39	0.066 ± 0.000
		± 0.15%	**± 0.32%**			
		Full External Error ± 1.39				
		Analytical Error ± 0.09				
Normal Isochron	**297.60 ± 2.30**	20.48284 ± 0.10130	**59.05 ± 0.33**	0.51	33.78	
	± 0.77%	± 0.49%	**± 0.57%**	77%	7	
		Full External Error ± 1.36		2.26	2σ Confidence Limit	
		Analytical Error ± 0.29		1.0000	Error Magnification	
Inverse Isochron	**297.59 ± 2.30**	20.48369 ± 0.10133	**59.06 ± 0.33**	0.51	33.78	
	± 0.77%	± 0.49%	**± 0.57%**	77%	7	
		Full External Error ± 1.36		2.26	2σ Confidence Limit	
		Analytical Error ± 0.29		1.0000	Error Magnification	
				38%	Spreading Factor	





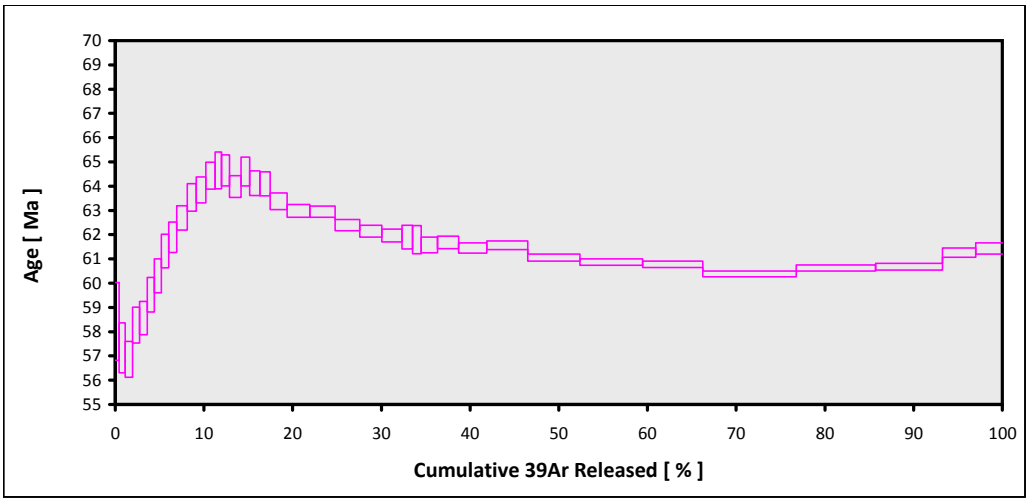
EXP#16D10828 > MV1203-D16-13 > Groundmass > MV1203 (13-INT-04)
WALVIS RIDGE > BULKINGTON WEST
15-OSU-07 (7A31-15) > Incremental Heating > Susan Schnur

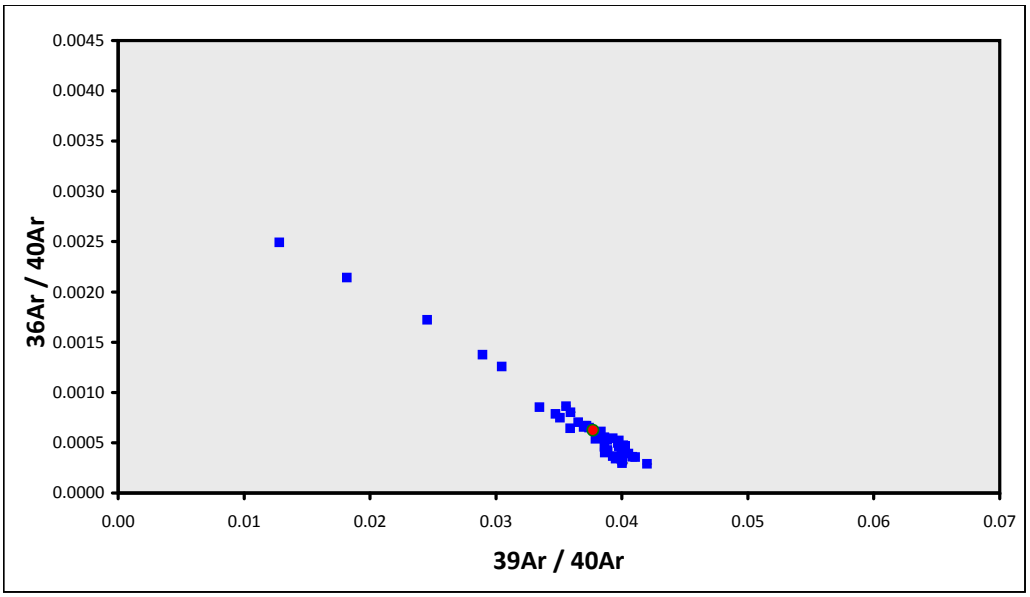
Information on Analysis and Constants Used in Calculations

Project = **MV1203 (13-INT-04)**
Sample = **MV1203-D16-13**
Material = **Groundmass**
Location = **Bulkington West**
Region = **Walvis Ridge**
Analyst = **Susan Schnur**
Irradiation = **15-OSU-07 (7A31-15)**
Position = **X: 0 | Y: 0 | Z/H: 53 mm**
FCT-NM Age = **28.201 ± 0.023 Ma**
FCT-NM Reference = **Kuiper et al (2008)**
FCT-NM 40Ar/39Ar Ratio = **9.84217 ± 0.01427**
FCT-NM J-value = **0.00159694 ± 0.00000232**
Air Shot 40Ar/36Ar = **304.7280 ± 0.4266**
Air Shot MDF = **0.99241953 ± 0.00066818 (LIN)**
Experiment Type = **Incremental Heating**
Extraction Method = **Bulk Laser Heating**
Heating = **77 sec**
Isolation = **3.00 min**
Instrument = **ARGUS-VI-D**
Preferred Age = Undefined
Age Classification = Undefined
IGSN = **IESRS0080**
Rock Class = **Igneous>Volcanic>Mafic**
Lithology = **Trachybasalt**
Lat-Lon = **31°31.3'S - 1°56.9'W**
Age Equations = **Min et al. (2000)**
Negative Intensities = **Allowed**
Collector Calibrations = **36Ar**
Decay 40K = **5.530 ± 0.048 E-10 1/a**
Decay 39Ar = **2.940 ± 0.016 E-07 1/h**
Decay 37Ar = **8.230 ± 0.012 E-04 1/h**
Decay 36Cl = **2.257 ± 0.015 E-06 1/a**
Decay 40K(EC,β^+) = **0.580 ± 0.009 E-10 1/a**
Decay 40K(β^-) = **4.950 ± 0.043 E-10 1/a**
Atmospheric 40/36(a) = **295.50**
Atmospheric 38/36(a) = **0.1869**
Production 39/37(ca) = **0.0006756 ± 0.0000089**
Production 38/37(ca) = **0.0000718 ± 0.0000092**
Production 36/37(ca) = **0.0002663 ± 0.0000004**
Production 40/39(k) = **0.003823 ± 0.000102**
Production 38/39(k) = **0.012031 ± 0.000019**
Production 36/38(cl) = **262.80 ± 1.71**
Scaling Ratio K/Ca = **0.430**
Abundance Ratio 40K/K = **1.1700 ± 0.0100 E-04**
Atomic Weight K = **39.0983 ± 0.0001 g**

Low-T unreliable, high-T attempting to form a plateau but steps are non-concordant.

Results	40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD	39Ar(k) (%,n)	K/Ca ± 2σ
Age Plateau Cannot Calculate						
Total Fusion Age		21.62835 ± 0.01556 ± 0.07%	**61.40 ± 0.18 ± 0.29%**		39	0.394 ± 0.002
			Full External Error ± 1.39			
			Analytical Error ± 0.04			
Normal Isochron Cannot Calculate						
Inverse Isochron Cannot Calculate						





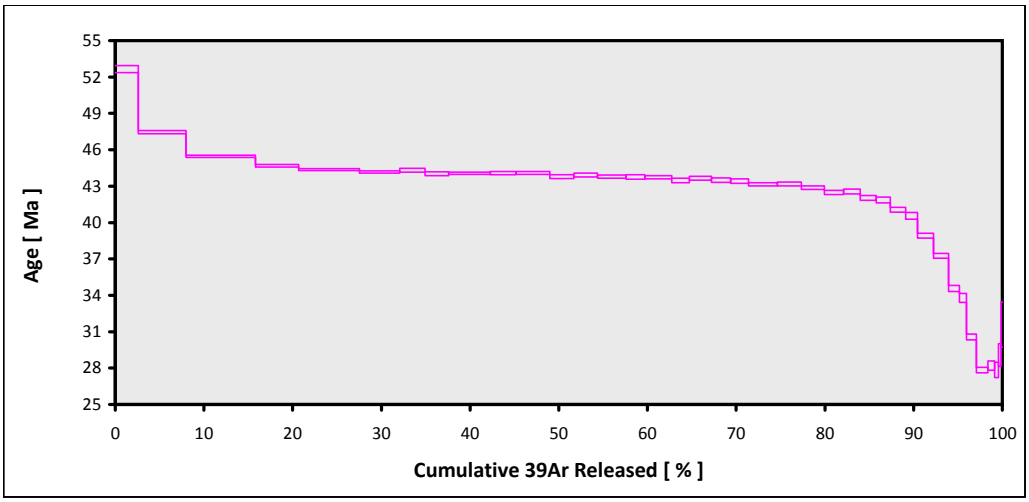
EXP#16D10885 > MV1203-D17-06 > Groundmass > MV1203 (13-INT-04)
WALVIS RIDGE > MAYHEW GUYOT
15-OSU-07 (7A32-15) > Incremental Heating > Susan Schnur

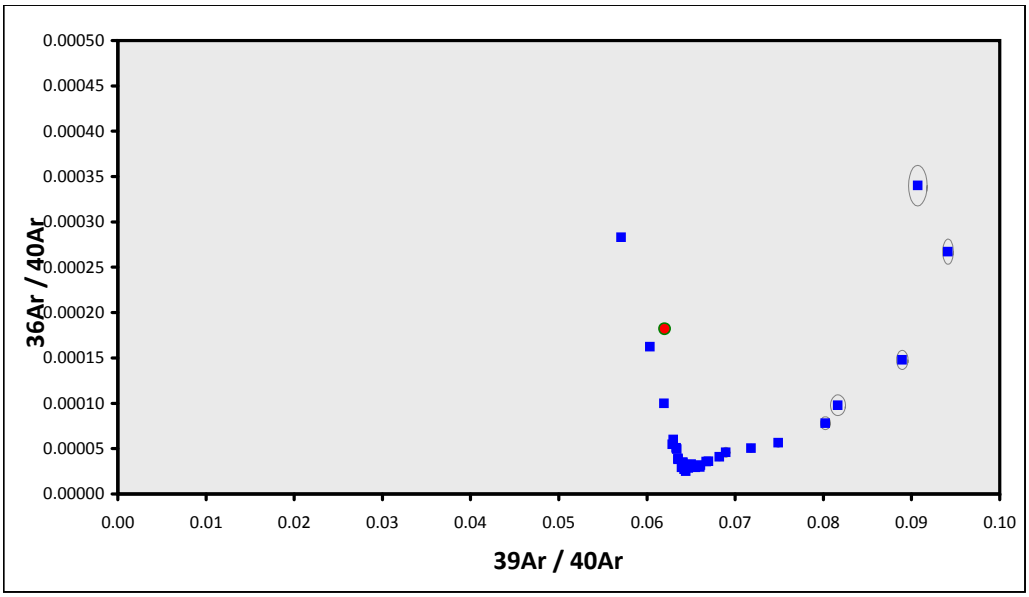
Information on Analysis and Constants Used in Calculations

Project = **MV1203 (13-INT-04)**
Sample = **MV1203-D17-06**
Material = **Groundmass**
Location = **Mayhew Guyot**
Region = **Walvis Ridge**
Analyst = **Susan Schnur**
Irradiation = **15-OSU-07 (7A32-15)**
Position = **X: 0 | Y: 0 | Z/H: 55.18 mm**
FCT-NM Age = **28.201 ± 0.023 Ma**
FCT-NM Reference = **Kuiper et al (2008)**
FCT-NM 40Ar/39Ar Ratio = **9.91344 ± 0.01418**
FCT-NM J-value = **0.00158546 ± 0.00000227**
Air Shot 40Ar/36Ar = **304.7250 ± 0.4266**
Air Shot MDF = **0.99242192 ± 0.00066818 (LIN)**
Experiment Type = **Incremental Heating**
Extraction Method = **Bulk Laser Heating**
Heating = **77 sec**
Isolation = **3.00 min**
Instrument = **ARGUS-VI-D**
Preferred Age = Undefined
Age Classification = Undefined
IGSN = **IESRS0081**
Rock Class = **Igneous>Volcanic>Mafic**
Lithology = **Basalt**
Lat-Lon = **32°06.5'S - 3°30.2'W**
Age Equations = **Min et al. (2000)**
Negative Intensities = **Allowed**
Collector Calibrations = **36Ar**
Decay 40K = **5.530 ± 0.048 E-10 1/a**
Decay 39Ar = **2.940 ± 0.016 E-07 1/h**
Decay 37Ar = **8.230 ± 0.012 E-04 1/h**
Decay 36Cl = **2.257 ± 0.015 E-06 1/a**
Decay 40K(EC,β^+) = **0.580 ± 0.009 E-10 1/a**
Decay 40K(β^-) = **4.950 ± 0.043 E-10 1/a**
Atmospheric 40/36(a) = **295.50**
Atmospheric 38/36(a) = **0.1869**
Production 39/37(ca) = **0.0006756 ± 0.0000089**
Production 38/37(ca) = **0.0000718 ± 0.0000092**
Production 36/37(ca) = **0.0002663 ± 0.0000004**
Production 40/39(k) = **0.003823 ± 0.000102**
Production 38/39(k) = **0.012031 ± 0.000019**
Production 36/38(cl) = **262.80 ± 1.71**
Scaling Ratio K/Ca = **0.430**
Abundance Ratio 40K/K = **1.1700 ± 0.0100 E-04**
Atomic Weight K = **39.0983 ± 0.0001 g**

Strong recoil effect, very minimal plateau at mid-T which is likely correct age but too small.

Results	40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD	39Ar(k) (%,n)	K/Ca ± 2σ
Age Plateau Cannot Calculate						
Total Fusion Age		15.25837 ± 0.00964 ± 0.06%	**43.23 ± 0.13 ± 0.29%**		39	0.111 ± 0.000
			Full External Error ± 0.98			
			Analytical Error ± 0.03			
Normal Isochron Cannot Calculate						
Inverse Isochron Cannot Calculate						





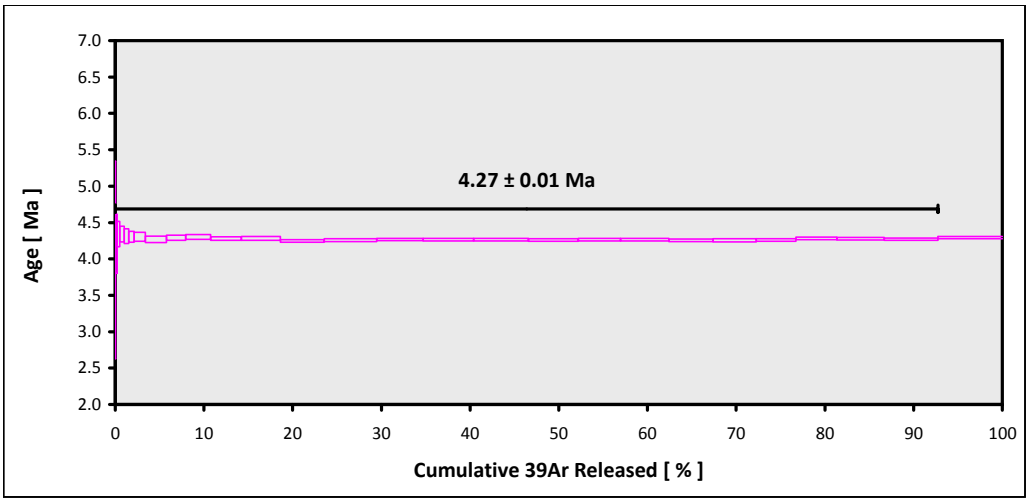
EXP#16D13459 > MV1203-D20B-06 > Biotite > MV1203 (13-INT-04)
WALVIS RIDGE > HUMPBACK SEAMOUNT
15-OSU-07 (7A39-15) > Incremental Heating > Susan Schnur

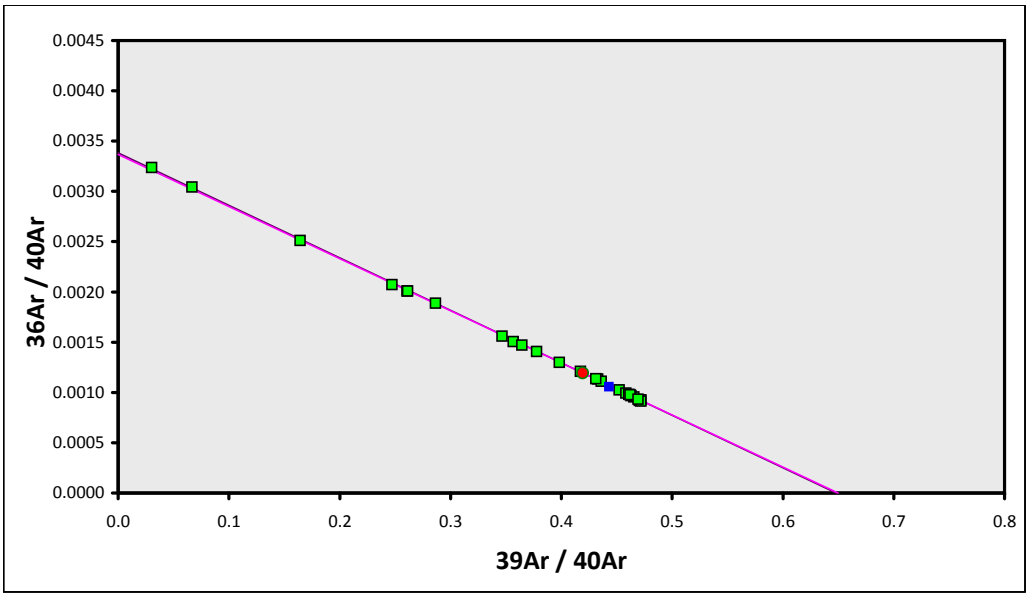
Information on Analysis and Constants Used in Calculations

Project = **MV1203 (13-INT-04)**
Sample = **MV1203-D20B-06**
Material = **Biotite**
Location = **Humpback Seamount**
Region = **Walvis Ridge**
Analyst = **Susan Schnur**
Irradiation = **15-OSU-07 (7A39-15)**
Position = **X: 0 | Y: 0 | Z/H: 65 mm**
FCT-NM Age = **28.201 ± 0.023 Ma**
FCT-NM Reference = **Kuiper et al (2008)**
FCT-NM 40Ar/39Ar Ratio = **10.26395 ± 0.01427**
FCT-NM J-value = **0.00153132 ± 0.00000213**
Air Shot 40Ar/36Ar = **304.4870 ± 0.4171**
Air Shot MDF = **0.99261166 ± 0.00066503 (LIN)**
Experiment Type = **Incremental Heating**
Extraction Method = **Bulk Laser Heating**
Heating = **77 sec**
Isolation = **1.50 min**
Instrument = **ARGUS-VI-D**
Preferred Age = **Plateau Age**
Age Classification = **Eruption Age**
IGSN = **IESRS0082**
Rock Class = **Igneous>Volcanic>Mafic**
Lithology = **Phonolite**
Lat-Lon = **33°34.7'S - 2°23.9'W**
Age Equations = **Min et al. (2000)**
Negative Intensities = **Allowed**
Collector Calibrations = **36Ar**
Decay 40K = **5.530 ± 0.048 E-10 1/a**
Decay 39Ar = **2.940 ± 0.016 E-07 1/h**
Decay 37Ar = **8.230 ± 0.012 E-04 1/h**
Decay 36Cl = **2.257 ± 0.015 E-06 1/a**
Decay 40K(EC,β^+) = **0.580 ± 0.009 E-10 1/a**
Decay 40K(β^-) = **4.950 ± 0.043 E-10 1/a**
Atmospheric 40/36(a) = **295.50**
Atmospheric 38/36(a) = **0.1869**
Production 39/37(ca) = **0.0006756 ± 0.0000089**
Production 38/37(ca) = **0.0000718 ± 0.0000092**
Production 36/37(ca) = **0.0002663 ± 0.0000004**
Production 40/39(k) = **0.003823 ± 0.000102**
Production 38/39(k) = **0.012031 ± 0.000019**
Production 36/38(cl) = **262.80 ± 1.71**
Scaling Ratio K/Ca = **0.430**
Abundance Ratio 40K/K = **1.1700 ± 0.0100 E-04**
Atomic Weight K = **39.0983 ± 0.0001 g**

Good plateau

Results	40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD	39Ar(k) (%,n)	K/Ca ± 2σ
Age Plateau		1.54271 ± 0.00176 (± 0.11%)	**4.27 ± 0.01 (± 0.30%)**	1.28	92.76	33 ± 7
		Full External Error ± 0.10		1.57	26	2σ Confidence Limit
		Analytical Error ± 0.00		1.1295	16%	Error Magnification
Total Fusion Age		1.54394 ± 0.00162 (± 0.10%)	**4.27 ± 0.01 (± 0.30%)**		27	78 ± 14
		Full External Error ± 0.10				
		Analytical Error ± 0.00				
Normal Isochron	**296.90 ± 1.59 (± 0.54%)**	1.53923 ± 0.00425 (± 0.28%)	**4.26 ± 0.02 (± 0.39%)**	1.17	92.76	
		Full External Error ± 0.10		1.58	26	2σ Confidence Limit
		Analytical Error ± 0.01		1.0803	26%	Error Magnification
Inverse Isochron	**296.94 ± 1.59 (± 0.54%)**	1.53918 ± 0.00425 (± 0.28%)	**4.26 ± 0.02 (± 0.39%)**	1.17	92.76	
		Full External Error ± 0.10		1.58	26	2σ Confidence Limit
		Analytical Error ± 0.01		1.0813	26%	Error Magnification
				68%		Spreading Factor





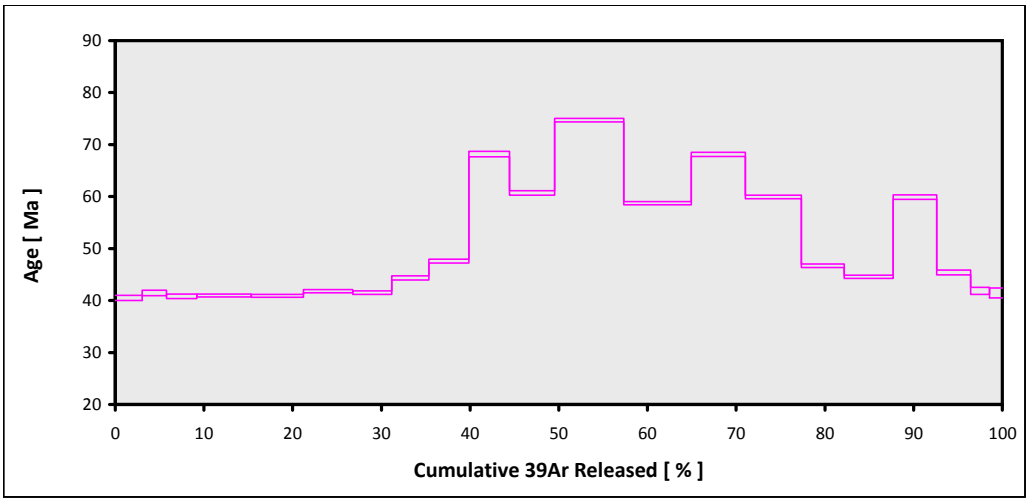
EXP#16D13502 > MV1203-D23-13A > Plagioclase > MV1203 (13-INT-04)
WALVIS RIDGE > WUST GUYOT
15-OSU-07 (7B7-15) > Incremental Heating > Susan Schnur

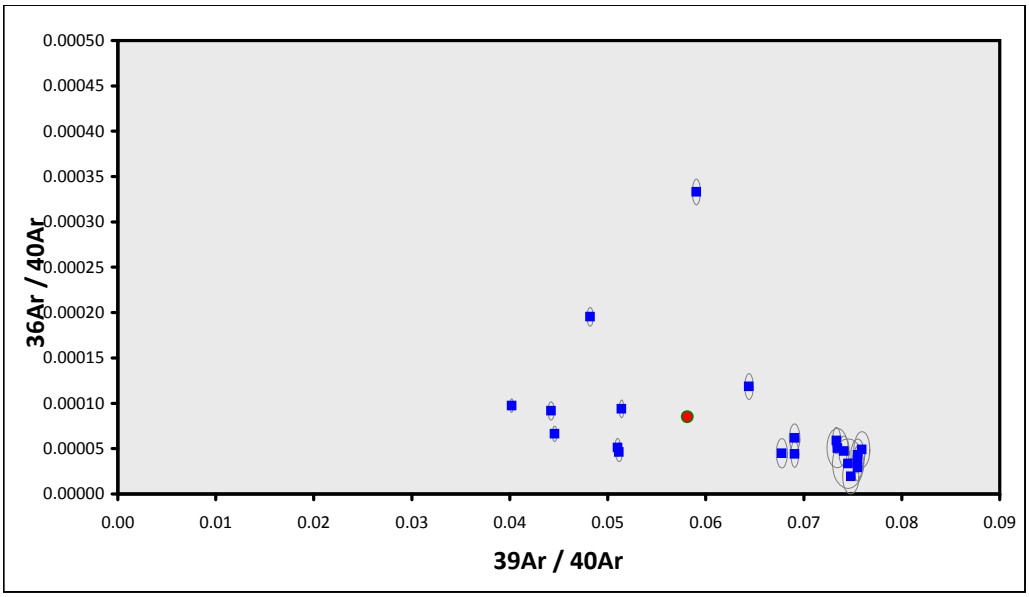
Information on Analysis and Constants Used in Calculations

Project = **MV1203 (13-INT-04)**
Sample = **MV1203-D23-13A**
Material = **Plagioclase**
Location = **Wust Guyot**
Region = **Walvis Ridge**
Analyst = **Susan Schnur**
Irradiation = **15-OSU-07 (7B7-15)**
Position = **X: 0 | Y: 0 | Z/H: 12.88 mm**
FCT-NM Age = **28.201 ± 0.023 Ma**
FCT-NM Reference = **Kuiper et al (2008)**
FCT-NM 40Ar/39Ar Ratio = **9.00364 ± 0.01288**
FCT-NM J-value = **0.00174567 ± 0.00000250**
Air Shot 40Ar/36Ar = **304.4460 ± 0.4140**
Air Shot MDF = **0.99264438 ± 0.00066391 (LIN)**
Experiment Type = **Incremental Heating**
Extraction Method = **Bulk Laser Heating**
Heating = **77 sec**
Isolation = **1.50 min**
Instrument = **ARGUS-VI-D**
Preferred Age = Undefined
Age Classification = Undefined
IGSN = **IESRS0083**
Rock Class = **Igneous>Volcanic>Mafic**
Lithology = **Trachybasalt**
Lat-Lon = **34°13.4'S - 3°46.2'W**
Age Equations = **Min et al. (2000)**
Negative Intensities = **Allowed**
Collector Calibrations = **36Ar**
Decay 40K = **5.530 ± 0.048 E-10 1/a**
Decay 39Ar = **2.940 ± 0.016 E-07 1/h**
Decay 37Ar = **8.230 ± 0.012 E-04 1/h**
Decay 36Cl = **2.257 ± 0.015 E-06 1/a**
Decay 40K(EC,β^+) = **0.580 ± 0.009 E-10 1/a**
Decay 40K(β^-) = **4.950 ± 0.043 E-10 1/a**
Atmospheric 40/36(a) = **295.50**
Atmospheric 38/36(a) = **0.1869**
Production 39/37(ca) = **0.0006756 ± 0.0000089**
Production 38/37(ca) = **0.0000718 ± 0.0000092**
Production 36/37(ca) = **0.0002663 ± 0.0000004**
Production 40/39(k) = **0.003823 ± 0.000102**
Production 38/39(k) = **0.012031 ± 0.000019**
Production 36/38(cl) = **262.80 ± 1.71**
Scaling Ratio K/Ca = **0.430**
Abundance Ratio 40K/K = **1.1700 ± 0.0100 E-04**
Atomic Weight K = **39.0983 ± 0.0001 g**

Tiny plateau at low-T but high-T is highly variable, likely full of melt inclusions.

Results	40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD	39Ar(k) (%,n)	K/Ca ± 2σ
Age Plateau						
Cannot Calculate						
Total Fusion Age		16.77297 ± 0.02848 ± 0.17%	**52.19 ± 0.17 ± 0.33%**		21	0.0080 ± 0.0000
			Full External Error ± 1.18			
			Analytical Error ± 0.09			
Normal Isochron						
Cannot Calculate						
Inverse Isochron						
Cannot Calculate						





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

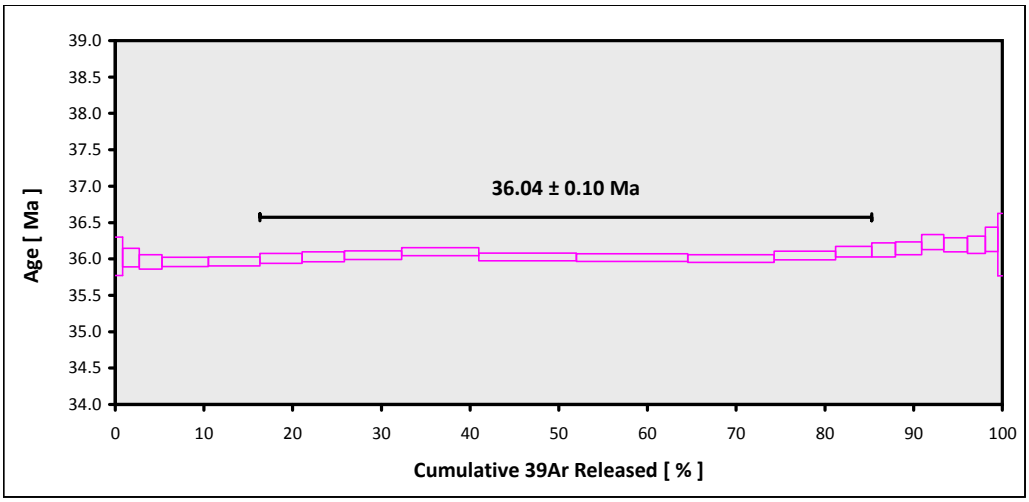
EXP#16D13537 > MV1203-D25-06 > Plagioclase > MV1203 (13-INT-04)
WALVIS RIDGE > GABRIEL GUYOT
15-OSU-07 (7B12-15) > Incremental Heating > Susan Schnur

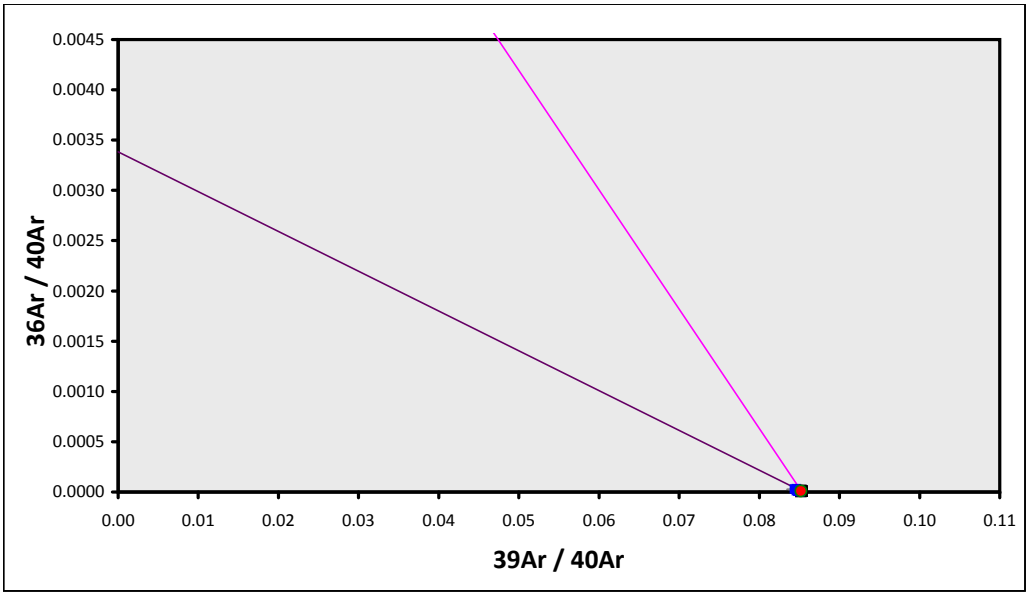
Information on Analysis and Constants Used in Calculations

Project = **MV1203 (13-INT-04)**
Sample = **MV1203-D25-06**
Material = **Plagioclase**
Location = **Gabriel Guyot**
Region = **Walvis Ridge**
Analyst = **Susan Schnur**
Irradiation = **15-OSU-07 (7B12-15)**
Position = **X: 0 | Y: 0 | Z/H: 21.9 mm**
FCT-NM Age = **28.201 ± 0.023 Ma**
FCT-NM Reference = **Kuiper et al (2008)**
FCT-NM 40Ar/39Ar Ratio = **9.13491 ± 0.01288**
FCT-NM J-value = **0.00172059 ± 0.00000243**
Air Shot 40Ar/36Ar = **304.4790 ± 0.4171**
Air Shot MDF = **0.99261804 ± 0.00066505 (LIN)**
Experiment Type = **Incremental Heating**
Extraction Method = **Bulk Laser Heating**
Heating = **77 sec**
Isolation = **1.50 min**
Instrument = **ARGUS-VI-D**
Preferred Age = **Plateau Age**
Age Classification = **Eruption Age**
IGSN = **IESRS0084**
Rock Class = **Igneous>Volcanic>Mafic**
Lithology = **Trachyte**
Lat-Lon = **35°12.6'S - 4°55.6'W**
Age Equations = **Min et al. (2000)**
Negative Intensities = **Allowed**
Collector Calibrations = **36Ar**
Decay 40K = **5.530 ± 0.048 E-10 1/a**
Decay 39Ar = **2.940 ± 0.016 E-07 1/h**
Decay 37Ar = **8.230 ± 0.012 E-04 1/h**
Decay 36Cl = **2.257 ± 0.015 E-06 1/a**
Decay 40K(EC,β^+) = **0.580 ± 0.009 E-10 1/a**
Decay 40K(β^-) = **4.950 ± 0.043 E-10 1/a**
Atmospheric 40/36(a) = **295.50**
Atmospheric 38/36(a) = **0.1869**
Production 39/37(ca) = **0.0006756 ± 0.0000089**
Production 38/37(ca) = **0.0000718 ± 0.0000092**
Production 36/37(ca) = **0.0002663 ± 0.0000004**
Production 40/39(k) = **0.003823 ± 0.000102**
Production 38/39(k) = **0.012031 ± 0.000019**
Production 36/38(cl) = **262.80 ± 1.71**
Scaling Ratio K/Ca = **0.430**
Abundance Ratio 40K/K = **1.1700 ± 0.0100 E-04**
Atomic Weight K = **39.0983 ± 0.0001 g**

Good plateau

Results	40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD	39Ar(k) (%,n)	K/Ca ± 2σ
Age Plateau		11.69980 ± 0.00758 ± 0.06%	**36.04 ± 0.10 ± 0.29%**	1.38 20%	68.99 9	0.227 ± 0.001
			Full External Error ± 0.82	2.00	2σ Confidence Limit	
			Analytical Error ± 0.02	1.1749	Error Magnification	
Total Fusion Age		11.70272 ± 0.00542 ± 0.05%	**36.05 ± 0.10 ± 0.28%**		21	0.225 ± 0.000
			Full External Error ± 0.82			
			Analytical Error ± 0.02			
Normal Isochron	**18.71 ± 173.31 ########**	11.72713 ± 0.01759 ± 0.15%	**36.12 ± 0.11 ± 0.32%**	1.00 43%	68.99 9	
			Full External Error ± 0.82	2.07	2σ Confidence Limit	
			Analytical Error ± 0.05	1.0000	Error Magnification	
Inverse Isochron Clustered Points	**98.74 ± 72.90 ± 73.83%**	11.71843 ± 0.01756 ± 0.15%	**36.10 ± 0.11 ± 0.32%**	0.87 53%	68.99 9	
			Full External Error ± 0.82	2.07	2σ Confidence Limit	
			Analytical Error ± 0.05	1.0000	Error Magnification	
				0%	Spreading Factor	





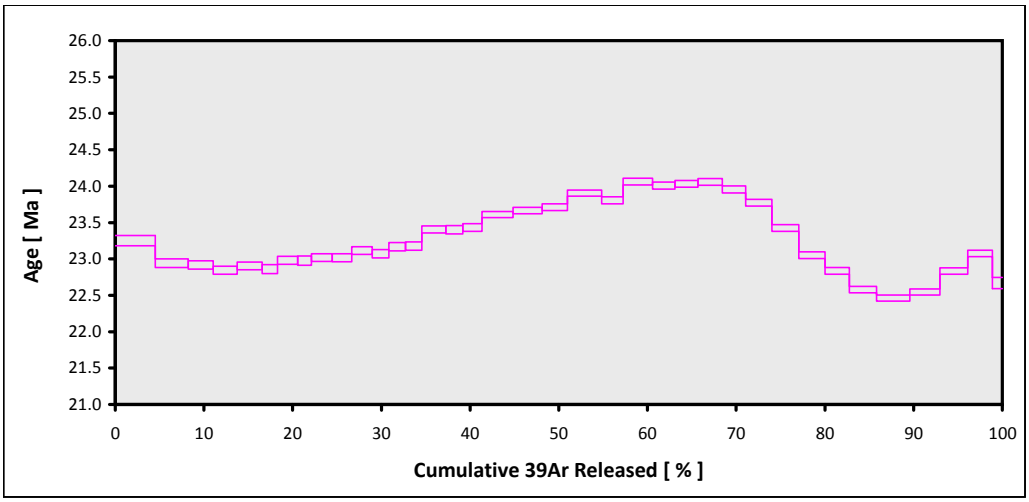
EXP#16D14713 > MV1203-D39-01A (LIGHT) > Groundmass > MV1203 (13-INT-04)
WALVIS RIDGE > RISSO SEAMOUNT
15-OSU-07 (7B19-15) > Incremental Heating > Susan Schnur

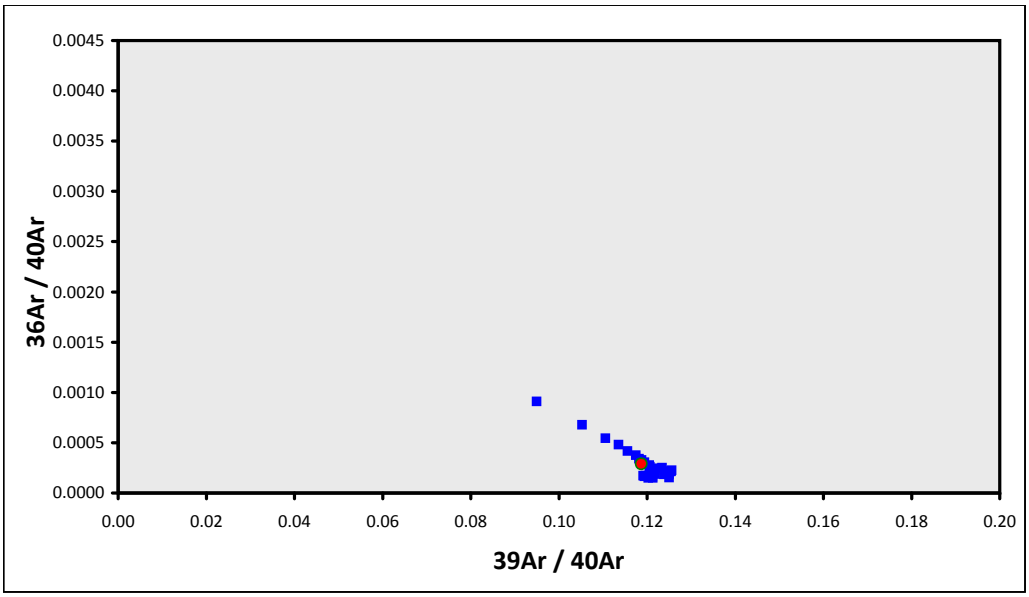
Information on Analysis and Constants Used in Calculations

Project = **MV1203 (13-INT-04)**
Sample = **MV1203-D39-01A (LIGHT)**
Material = **Groundmass**
Location = **Risso Seamount**
Region = **Walvis Ridge**
Analyst = **Susan Schnur**
Irradiation = **15-OSU-07 (7B19-15)**
Position = **X: 0 | Y: 0 | Z/H: 32.85 mm**
FCT-NM Age = **28.201 ± 0.023 Ma**
FCT-NM Reference = **Kuiper et al (2008)**
FCT-NM 40Ar/39Ar Ratio = **9.34849 ± 0.01290**
FCT-NM J-value = **0.00168128 ± 0.00000232**
Air Shot 40Ar/36Ar = **304.3840 ± 0.4870**
Air Shot MDF = **0.99269387 ± 0.00069491 (LIN)**
Experiment Type = **Incremental Heating**
Extraction Method = **Bulk Laser Heating**
Heating = **77 sec**
Isolation = **3.00 min**
Instrument = **ARGUS-VI-D**
Preferred Age = Undefined
Age Classification = Undefined
IGSN = **IESRS0085**
Rock Class = **Igneous>Volcanic>Mafic**
Lithology = **Tephrite**
Lat-Lon = **38°15.5'S - 8°11.3'W**
Age Equations = **Min et al. (2000)**
Negative Intensities = **Allowed**
Collector Calibrations = **36Ar**
Decay 40K = **5.530 ± 0.048 E-10 1/a**
Decay 39Ar = **2.940 ± 0.016 E-07 1/h**
Decay 37Ar = **8.230 ± 0.012 E-04 1/h**
Decay 36Cl = **2.257 ± 0.015 E-06 1/a**
Decay 40K(EC,β^+) = **0.580 ± 0.009 E-10 1/a**
Decay 40K(β^-) = **4.950 ± 0.043 E-10 1/a**
Atmospheric 40/36(a) = **295.50**
Atmospheric 38/36(a) = **0.1869**
Production 39/37(ca) = **0.0006756 ± 0.0000089**
Production 38/37(ca) = **0.0000718 ± 0.0000092**
Production 36/37(ca) = **0.0002663 ± 0.0000004**
Production 40/39(k) = **0.003823 ± 0.000102**
Production 38/39(k) = **0.012031 ± 0.000019**
Production 36/38(cl) = **262.80 ± 1.71**
Scaling Ratio K/Ca = **0.430**
Abundance Ratio 40K/K = **1.1700 ± 0.0100 E-04**
Atomic Weight K = **39.0983 ± 0.0001 g**

Steps form wavy shape, low-T steps yield a very small plateau.

Results	40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD	39Ar(k) (%,n)	K/Ca ± 2σ
Age Plateau						
Cannot Calculate						
Total Fusion Age		7.70426 ± 0.00286 ± 0.04%	**23.27 ± 0.06 ± 0.28%**		37	0.329 ± 0.001
			Full External Error ± 0.53			
			Analytical Error ± 0.01			
Normal Isochron						
Cannot Calculate						
Inverse Isochron						
Cannot Calculate						





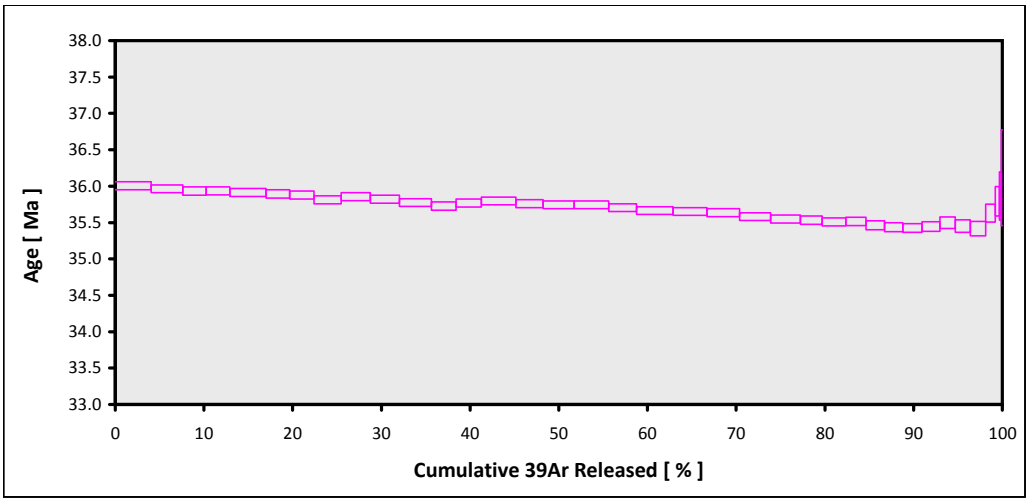
EXP#16D14767 > MV1203-D25-06 > Groundmass > MV1203 (13-INT-04)
WALVIS RIDGE > GABRIEL GUYOT
15-OSU-07 (7B11-15) > Incremental Heating > Susan Schnur

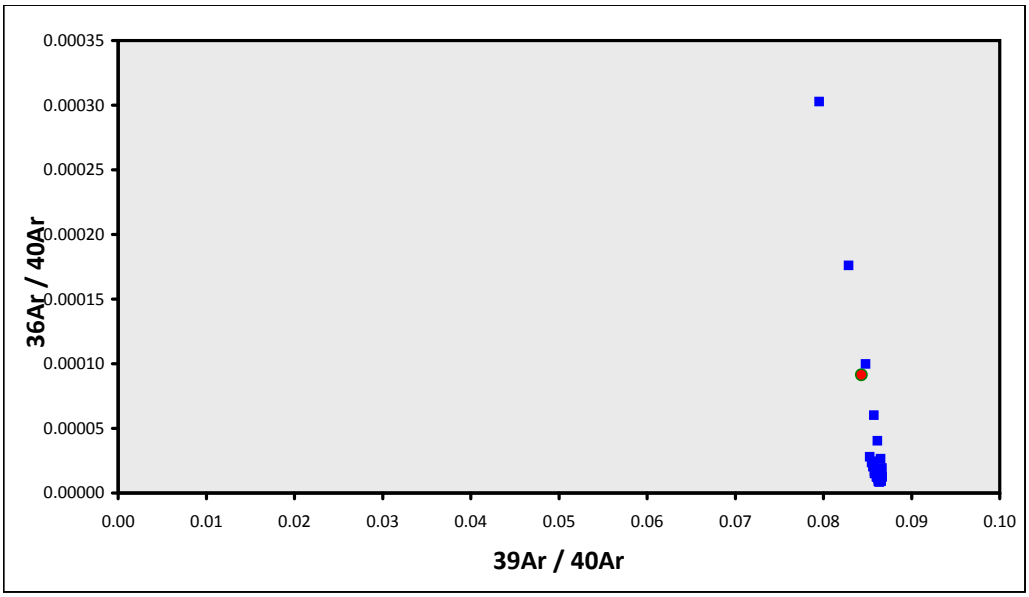
Information on Analysis and Constants Used in Calculations

Project = **MV1203 (13-INT-04)**
Sample = **MV1203-D25-06**
Material = **Groundmass**
Location = **Gabriel Guyot**
Region = **Walvis Ridge**
Analyst = **Susan Schnur**
Irradiation = **15-OSU-07 (7B11-15)**
Position = **X: 0 | Y: 0 | Z/H: 19.17 mm**
FCT-NM Age = **28.201 ± 0.023 Ma**
FCT-NM Reference = **Kuiper et al (2008)**
FCT-NM 40Ar/39Ar Ratio = **9.09092 ± 0.01291**
FCT-NM J-value = **0.00172891 ± 0.00000246**
Air Shot 40Ar/36Ar = **304.3630 ± 0.4931**
Air Shot MDF = **0.99271063 ± 0.00069769 (LIN)**
Experiment Type = **Incremental Heating**
Extraction Method = **Bulk Laser Heating**
Heating = **77 sec**
Isolation = **3.00 min**
Instrument = **ARGUS-VI-D**
Preferred Age = Undefined
Age Classification = Undefined
IGSN = **IESRS0086**
Rock Class = **Igneous>Volcanic>Mafic**
Lithology = **Trachyte**
Lat-Lon = **35°12.6'S - 4°55.6'W**
Age Equations = **Min et al. (2000)**
Negative Intensities = **Allowed**
Collector Calibrations = **36Ar**
Decay 40K = **5.530 ± 0.048 E-10 1/a**
Decay 39Ar = **2.940 ± 0.016 E-07 1/h**
Decay 37Ar = **8.230 ± 0.012 E-04 1/h**
Decay 36Cl = **2.257 ± 0.015 E-06 1/a**
Decay 40K(EC,β^+) = **0.580 ± 0.009 E-10 1/a**
Decay 40K(β^-) = **4.950 ± 0.043 E-10 1/a**
Atmospheric 40/36(a) = **295.50**
Atmospheric 38/36(a) = **0.1869**
Production 39/37(ca) = **0.0006756 ± 0.0000089**
Production 38/37(ca) = **0.0000718 ± 0.0000092**
Production 36/37(ca) = **0.0002663 ± 0.0000004**
Production 40/39(k) = **0.003823 ± 0.000102**
Production 38/39(k) = **0.012031 ± 0.000019**
Production 36/38(cl) = **262.80 ± 1.71**
Scaling Ratio K/Ca = **0.430**
Abundance Ratio 40K/K = **1.1700 ± 0.0100 E-04**
Atomic Weight K = **39.0983 ± 0.0001 g**

Gently downward sloping pattern, strong recoil effect.

Results	40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD	39Ar(k) (%,n)	K/Ca ± 2σ
Age Plateau						
Cannot Calculate						
Total Fusion Age		11.53816 ± 0.00328 ± 0.03%	**35.72 ± 0.10 ± 0.28%**		37	3.92 ± 0.04
			Full External Error ± 0.81			
			Analytical Error ± 0.01			
Normal Isochron						
Cannot Calculate						
Inverse Isochron						
Cannot Calculate						





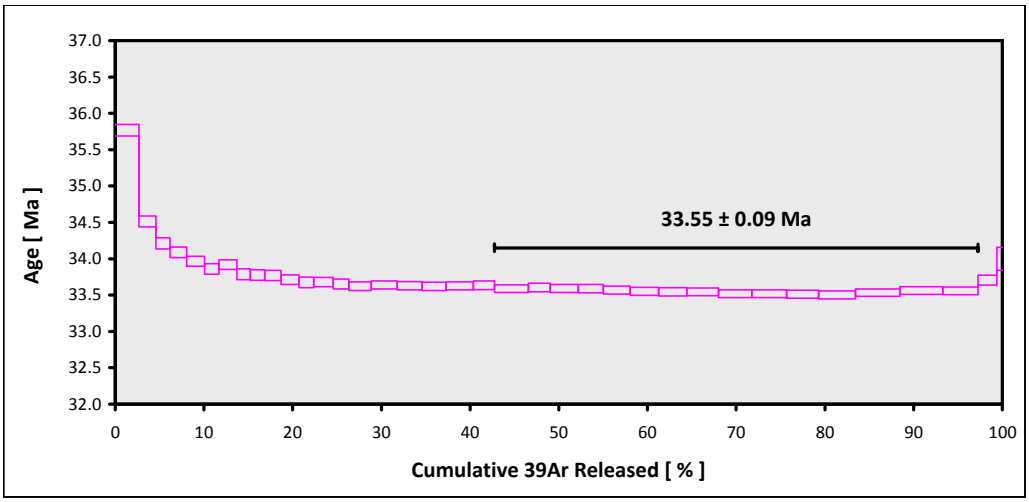
EXP#16D14821 > MV1203-D27-08 > Groundmass > MV1203 (13-INT-04)
WALVIS RIDGE > RIGHT GUYOT
15-OSU-07 (7B15-15) > Incremental Heating > Susan Schnur

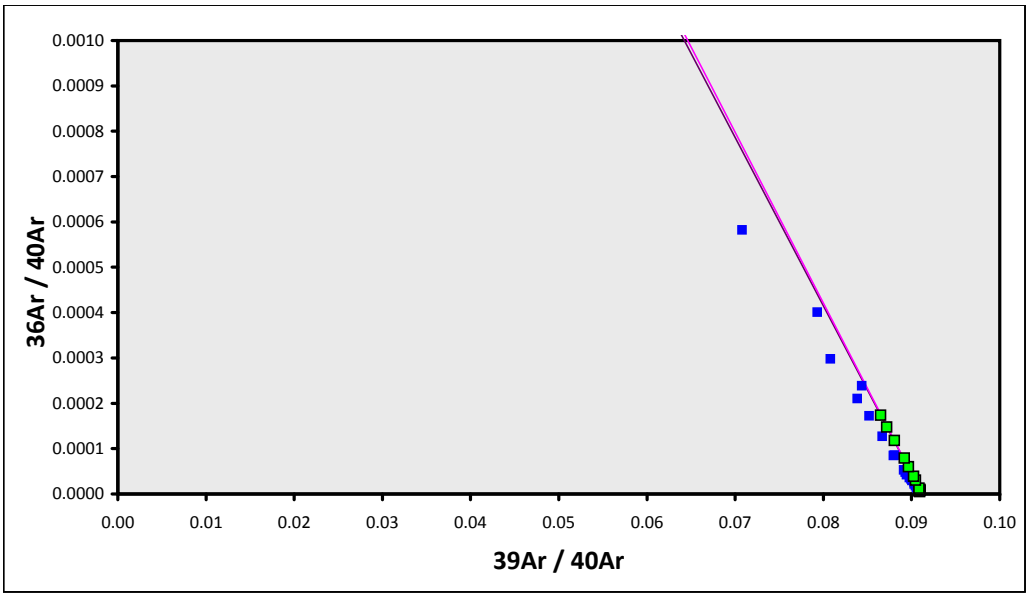
Information on Analysis and Constants Used in Calculations

Project = **MV1203 (13-INT-04)**
Sample = **MV1203-D27-08**
Material = **Groundmass**
Location = **Right Guyot**
Region = **Walvis Ridge**
Analyst = **Susan Schnur**
Irradiation = **15-OSU-07 (7B15-15)**
Position = **X: 0 | Y: 0 | Z/H: 25.8 mm**
FCT-NM Age = **28.201 ± 0.023 Ma**
FCT-NM Reference = **Kuiper et al (2008)**
FCT-NM 40Ar/39Ar Ratio = **9.20416 ± 0.01289**
FCT-NM J-value = **0.00170764 ± 0.00000239**
Air Shot 40Ar/36Ar = **304.3890 ± 0.4901**
Air Shot MDF = **0.99268987 ± 0.00069627 (LIN)**
Experiment Type = **Incremental Heating**
Extraction Method = **Bulk Laser Heating**
Heating = **77 sec**
Isolation = **3.00 min**
Instrument = **ARGUS-VI-D**
Preferred Age = **Plateau Age**
Age Classification = **Eruption Age**
IGSN = **IESRS0087**
Rock Class = **Igneous>Volcanic>Mafic**
Lithology = **Trachyte**
Lat-Lon = **35°36.4'S - 5°41.4'W**
Age Equations = **Min et al. (2000)**
Negative Intensities = **Allowed**
Collector Calibrations = **36Ar**
Decay 40K = **5.530 ± 0.048 E-10 1/a**
Decay 39Ar = **2.940 ± 0.016 E-07 1/h**
Decay 37Ar = **8.230 ± 0.012 E-04 1/h**
Decay 36Cl = **2.257 ± 0.015 E-06 1/a**
Decay 40K(EC,β^+) = **0.580 ± 0.009 E-10 1/a**
Decay 40K(β^-) = **4.950 ± 0.043 E-10 1/a**
Atmospheric 40/36(a) = **295.50**
Atmospheric 38/36(a) = **0.1869**
Production 39/37(ca) = **0.0006756 ± 0.0000089**
Production 38/37(ca) = **0.0000718 ± 0.0000092**
Production 36/37(ca) = **0.0002663 ± 0.0000004**
Production 40/39(k) = **0.003823 ± 0.000102**
Production 38/39(k) = **0.012031 ± 0.000019**
Production 36/38(cl) = **262.80 ± 1.71**
Scaling Ratio K/Ca = **0.430**
Abundance Ratio 40K/K = **1.1700 ± 0.0100 E-04**
Atomic Weight K = **39.0983 ± 0.0001 g**

Low-T shows recoil effect but high-T steps yield a decent plateau.

Results	40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD	39Ar(k) (%,n)	K/Ca ± 2σ
Age Plateau		10.96668 ± 0.00535 ± 0.05%	**33.55 ± 0.09** **± 0.28%**	1.33 18%	54.52 15	61.4 ± 17.4
			Full External Error ± 0.76	1.76	2σ Confidence Limit	
			Analytical Error ± 0.02	1.1522	Error Magnification	
Total Fusion Age		11.01877 ± 0.00337 ± 0.03%	**33.71 ± 0.09** **± 0.28%**		37	57.2 ± 11.4
			Full External Error ± 0.76			
			Analytical Error ± 0.01			
Normal Isochron Error Chron	**283.10 ± 10.84** **± 3.83%**	10.97943 ± 0.00915 ± 0.08%	**33.59 ± 0.10** **± 0.29%**	2.21 1%	54.52 15	
			Full External Error ± 0.76	1.78	2σ Confidence Limit	
			Analytical Error ± 0.03	1.4872	Error Magnification	
Inverse Isochron Clustered Points	**291.25 ± 8.39** **± 2.88%**	10.96909 ± 0.00711 ± 0.06%	**33.56 ± 0.10** **± 0.28%**	1.33 19%	54.52 15	
			Full External Error ± 0.76	1.78	2σ Confidence Limit	
			Analytical Error ± 0.02	1.1512	Error Magnification	
				5%	Spreading Factor	





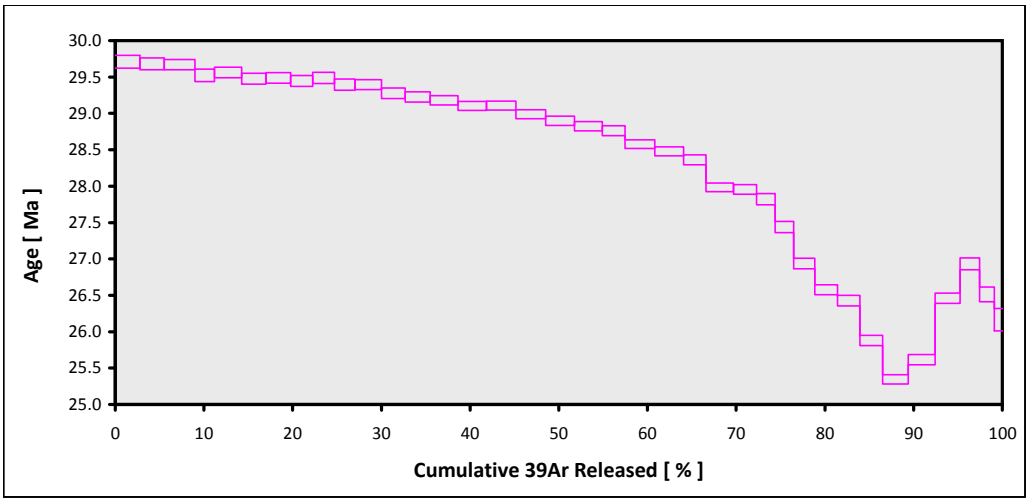
EXP#16D14902 > MV1203-D30-01 > Groundmass > MV1203 (13-INT-04)
WALVIS RIDGE > HAVISIDE GUYOT
15-OSU-07 (7B18-15) > Incremental Heating > Susan Schnur

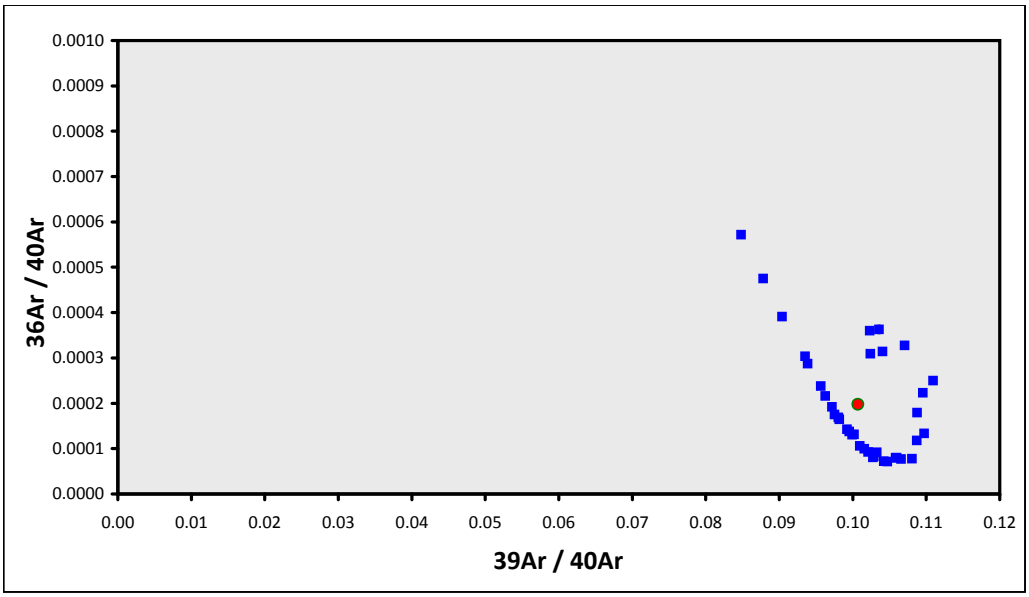
Information on Analysis and Constants Used in Calculations

Project = **MV1203 (13-INT-04)**
Sample = **MV1203-D30-01**
Material = **Groundmass**
Location = **Haviside Guyot**
Region = **Walvis Ridge**
Analyst = **Susan Schnur**
Irradiation = **15-OSU-07 (7B18-15)**
Position = **X: 0 | Y: 0 | Z/H: 30.39 mm**
FCT-NM Age = **28.201 ± 0.023 Ma**
FCT-NM Reference = **Kuiper et al (2008)**
FCT-NM 40Ar/39Ar Ratio = **9.29533 ± 0.01283**
FCT-NM J-value = **0.00169089 ± 0.00000233**
Air Shot 40Ar/36Ar = **304.3680 ± 0.4900**
Air Shot MDF = **0.99270664 ± 0.00069631 (LIN)**
Experiment Type = **Incremental Heating**
Extraction Method = **Bulk Laser Heating**
Heating = **77 sec**
Isolation = **3.00 min**
Instrument = **ARGUS-VI-D**
Preferred Age = Undefined
Age Classification = Undefined
IGSN = **IESRS0088**
Rock Class = **Igneous>Volcanic>Mafic**
Lithology = **Trachybasalt**
Lat-Lon = **36°15.2'S - 7°19.3'W**
Age Equations = **Min et al. (2000)**
Negative Intensities = **Allowed**
Collector Calibrations = **36Ar**
Decay 40K = **5.530 ± 0.048 E-10 1/a**
Decay 39Ar = **2.940 ± 0.016 E-07 1/h**
Decay 37Ar = **8.230 ± 0.012 E-04 1/h**
Decay 36Cl = **2.257 ± 0.015 E-06 1/a**
Decay 40K(EC,β^+) = **0.580 ± 0.009 E-10 1/a**
Decay 40K(β^-) = **4.950 ± 0.043 E-10 1/a**
Atmospheric 40/36(a) = **295.50**
Atmospheric 38/36(a) = **0.1869**
Production 39/37(ca) = **0.0006756 ± 0.0000089**
Production 38/37(ca) = **0.0000718 ± 0.0000092**
Production 36/37(ca) = **0.0002663 ± 0.0000004**
Production 40/39(k) = **0.003823 ± 0.000102**
Production 38/39(k) = **0.012031 ± 0.000019**
Production 36/38(cl) = **262.80 ± 1.71**
Scaling Ratio K/Ca = **0.430**
Abundance Ratio 40K/K = **1.1700 ± 0.0100 E-04**
Atomic Weight K = **39.0983 ± 0.0001 g**

Plateau slopes downards and has a strange older phase at highest T.

Results	40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD	39Ar(k) (%,n)	K/Ca ± 2σ
Age Plateau						
Cannot Calculate						
Total Fusion Age		9.34862 ± 0.00390 ± 0.04%	**28.36 ± 0.08 ± 0.28%**		37	0.296 ± 0.001
			Full External Error ± 0.64			
			Analytical Error ± 0.01			
Normal Isochron						
Cannot Calculate						
Inverse Isochron						
Cannot Calculate						





OSU Argon Geochronology Lab
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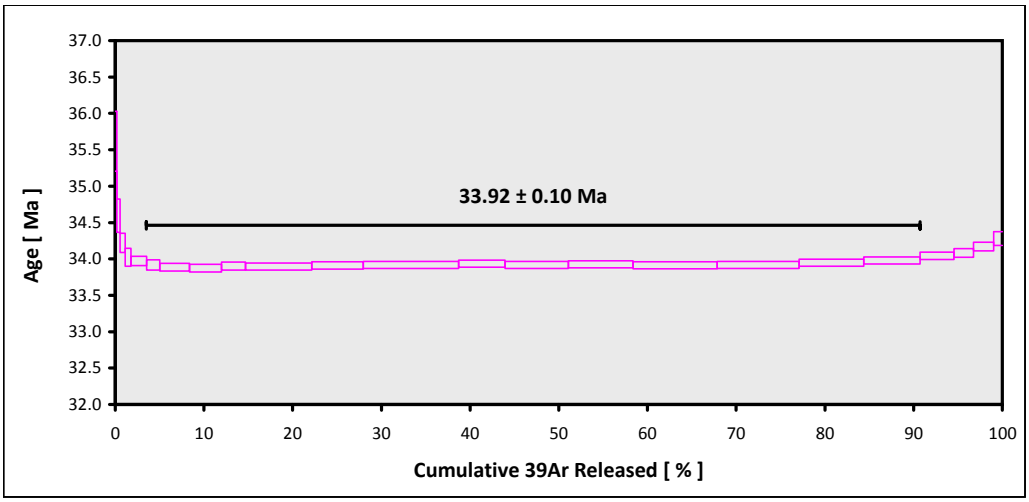
EXP#16D14956 > MV1203-D27-01 > K-Feldspar > MV1203 (13-INT-04)
WALVIS RIDGE > RIGHT GUYOT
15-OSU-07 (7B14-15) > Incremental Heating > Susan Schnur

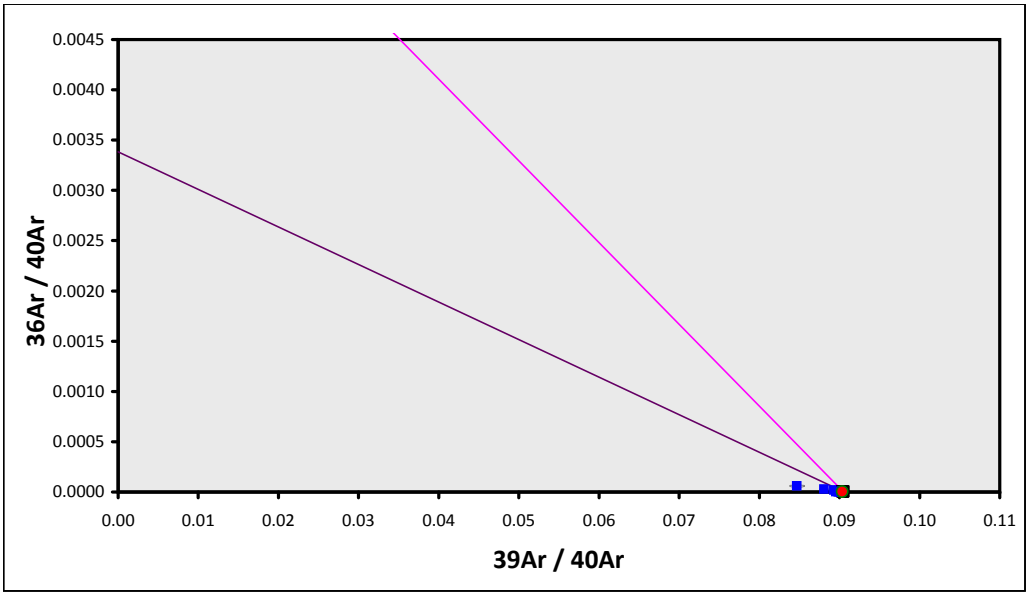
Information on Analysis and Constants Used in Calculations

Project = **MV1203 (13-INT-04)**
Sample = **MV1203-D27-01**
Material = **K-Feldspar**
Location = **Right Guyot**
Region = **Walvis Ridge**
Analyst = **Susan Schnur**
Irradiation = **15-OSU-07 (7B14-15)**
Position = **X: 0 | Y: 0 | Z/H: 23.64 mm**
FCT-NM Age = **28.201 ± 0.023 Ma**
FCT-NM Reference = **Kuiper et al (2008)**
FCT-NM 40Ar/39Ar Ratio = **9.16487 ± 0.01283**
FCT-NM J-value = **0.00171496 ± 0.00000240**
Air Shot 40Ar/36Ar = **304.3690 ± 0.4900**
Air Shot MDF = **0.99270584 ± 0.00069631 (LIN)**
Experiment Type = **Incremental Heating**
Extraction Method = **Bulk Laser Heating**
Heating = **77 sec**
Isolation = **1.50 min**
Instrument = **ARGUS-VI-D**
Preferred Age = **Plateau Age**
Age Classification = **Eruption Age**
IGSN = **IESRS0089**
Rock Class = **Igneous>Volcanic>Mafic**
Lithology = **Trachyte**
Lat-Lon = **35°36.4'S - 5°41.4'W**
Age Equations = **Min et al. (2000)**
Negative Intensities = **Allowed**
Collector Calibrations = **36Ar**
Decay 40K = **5.530 ± 0.048 E-10 1/a**
Decay 39Ar = **2.940 ± 0.016 E-07 1/h**
Decay 37Ar = **8.230 ± 0.012 E-04 1/h**
Decay 36Cl = **2.257 ± 0.015 E-06 1/a**
Decay 40K(EC,β^+) = **0.580 ± 0.009 E-10 1/a**
Decay 40K(β^-) = **4.950 ± 0.043 E-10 1/a**
Atmospheric 40/36(a) = **295.50**
Atmospheric 38/36(a) = **0.1869**
Production 39/37(ca) = **0.0006756 ± 0.0000089**
Production 38/37(ca) = **0.0000718 ± 0.0000092**
Production 36/37(ca) = **0.0002663 ± 0.0000004**
Production 40/39(k) = **0.003823 ± 0.000102**
Production 38/39(k) = **0.012031 ± 0.000019**
Production 36/38(cl) = **262.80 ± 1.71**
Scaling Ratio K/Ca = **0.430**
Abundance Ratio 40K/K = **1.1700 ± 0.0100 E-04**
Atomic Weight K = **39.0983 ± 0.0001 g**

Good plateau

Results	40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD	39Ar(k) (%,n)	K/Ca ± 2σ
Age Plateau		11.04029 ± 0.00460 ± 0.04%	**33.92 ± 0.10 ± 0.28%**	1.06 39% Full External Error ± 0.77 Analytical Error ± 0.01	87.21 14 1.78 2σ Confidence Limit 1.0282 Error Magnification	64 ± 11
Total Fusion Age		11.04950 ± 0.00423 ± 0.04%	**33.95 ± 0.10 ± 0.28%** Full External Error ± 0.77 Analytical Error ± 0.01		23	69 ± 14
Normal Isochron	**111.40 ± 257.66 ± ########**	11.04980 ± 0.01400 ± 0.13%	**33.95 ± 0.10 ± 0.30%** Full External Error ± 0.77 Analytical Error ± 0.04	1.01 44% 1.82 2σ Confidence Limit 1.0039 Error Magnification	87.21 14	
Inverse Isochron Clustered Points	**135.90 ± 75.28 ± 55.39%**	11.04850 ± 0.01404 ± 0.13%	**33.94 ± 0.10 ± 0.30%** Full External Error ± 0.77 Analytical Error ± 0.04	1.02 43% 1.82 2σ Confidence Limit 1.0106 Error Magnification 0% Spreading Factor	87.21 14	





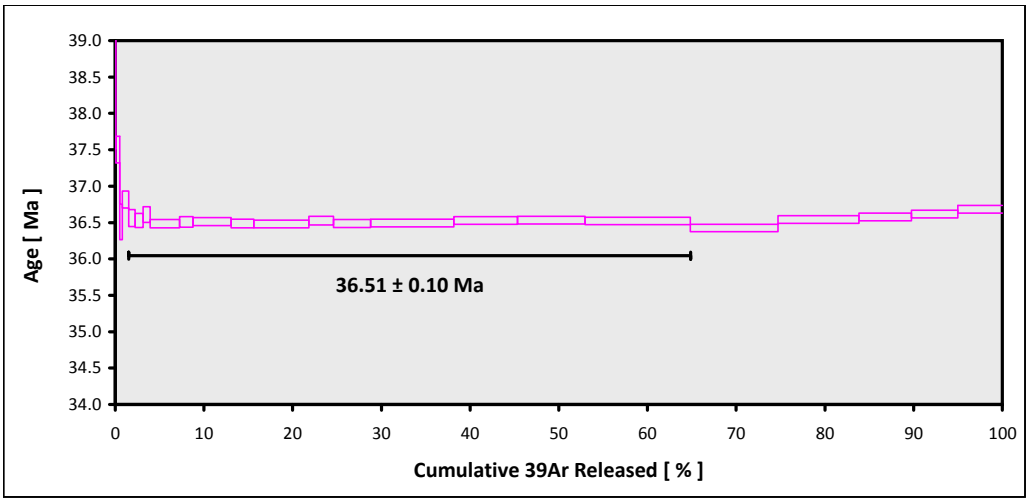
EXP#16D16095 > MV1203-D24-02 > K-Feldspar > MV1203 (13-INT-04)
WALVIS RIDGE > COLERIDGE GUYOT
15-OSU-07 (7B8-15) > Incremental Heating > Susan Schnur

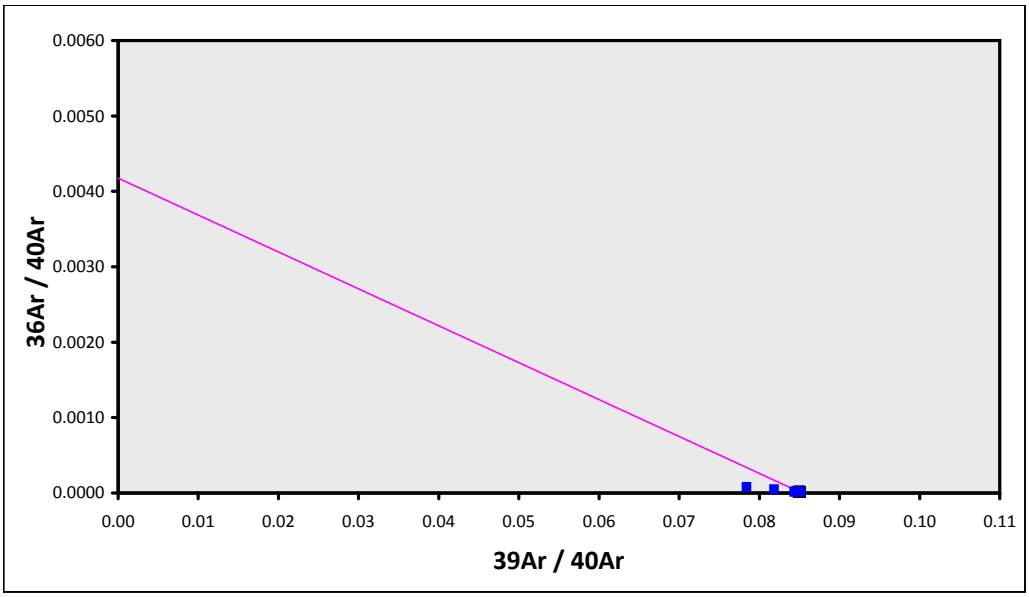
Information on Analysis and Constants Used in Calculations

Project = **MV1203 (13-INT-04)**
Sample = **MV1203-D24-02**
Material = **K-Feldspar**
Location = **Coleridge Guyot**
Region = **Walvis Ridge**
Analyst = **Susan Schnur**
Irradiation = **15-OSU-07 (7B8-15)**
Position = **X: 0 | Y: 0 | Z/H: 14.5 mm**
FCT-NM Age = **28.201 ± 0.023 Ma**
FCT-NM Reference = **Kuiper et al (2008)**
FCT-NM 40Ar/39Ar Ratio = **9.02424 ± 0.01290**
FCT-NM J-value = **0.00174169 ± 0.00000249**
Air Shot 40Ar/36Ar = **304.4970 ± 0.4872**
Air Shot MDF = **0.99260368 ± 0.00069466 (LIN)**
Experiment Type = **Incremental Heating**
Extraction Method = **Bulk Laser Heating**
Heating = **77 sec**
Isolation = **1.50 min**
Instrument = **ARGUS-VI-D**
Preferred Age = **Plateau Age**
Age Classification = **Eruption Age**
IGSN = **IESRS0090**
Rock Class = **Igneous>Volcanic>Mafic**
Lithology = **Trachyte**
Lat-Lon = **34°47.9'S - 5°03.8'W**
Age Equations = **Min et al. (2000)**
Negative Intensities = **Allowed**
Collector Calibrations = **36Ar**
Decay 40K = **5.530 ± 0.048 E-10 1/a**
Decay 39Ar = **2.940 ± 0.016 E-07 1/h**
Decay 37Ar = **8.230 ± 0.012 E-04 1/h**
Decay 36Cl = **2.257 ± 0.015 E-06 1/a**
Decay 40K(EC,β^+) = **0.580 ± 0.009 E-10 1/a**
Decay 40K(β^-) = **4.950 ± 0.043 E-10 1/a**
Atmospheric 40/36(a) = **295.50**
Atmospheric 38/36(a) = **0.1869**
Production 39/37(ca) = **0.0006756 ± 0.0000089**
Production 38/37(ca) = **0.0000718 ± 0.0000092**
Production 36/37(ca) = **0.0002663 ± 0.0000004**
Production 40/39(k) = **0.003823 ± 0.000102**
Production 38/39(k) = **0.012031 ± 0.000019**
Production 36/38(cl) = **262.80 ± 1.71**
Scaling Ratio K/Ca = **0.430**
Abundance Ratio 40K/K = **1.1700 ± 0.0100 E-04**
Atomic Weight K = **39.0983 ± 0.0001 g**

High-T blip (excluded) but otherwise plateau is Good.

Results	40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD	39Ar(k) (%,n)	K/Ca ± 2σ
Age Plateau		11.71025 ± 0.00523	**36.51 ± 0.10**	0.77	63.33	22.6 ± 1.5
		± 0.04%	**± 0.29%**	69%	14	
		Full External Error ± 0.83		1.78	2σ Confidence Limit	
		Analytical Error ± 0.02		1.0000	Error Magnification	
Total Fusion Age		11.71705 ± 0.00458	**36.53 ± 0.10**		23	24.3 ± 1.7
		± 0.04%	**± 0.29%**			
		Full External Error ± 0.83				
		Analytical Error ± 0.01				
Normal Isochron	28.11 **± 263.70**	11.76700 ± 0.04600	**36.69 ± 0.18**	1.21	63.33	
	########	± 0.39%	**± 0.48%**	27%	14	
		Full External Error ± 0.84		1.82	2σ Confidence Limit	
		Analytical Error ± 0.14		1.1001	Error Magnification	
Inverse Isochron	**239.57 ± 130.50**	11.71997 ± 0.04199	**36.54 ± 0.17**	0.82	63.33	
Clustered Points	**± 54.47%**	± 0.36%	**± 0.45%**	63%	14	
		Full External Error ± 0.84		1.82	2σ Confidence Limit	
		Analytical Error ± 0.13		1.0000	Error Magnification	
				0%	Spreading Factor	





OSU Argon Geochronology Lab
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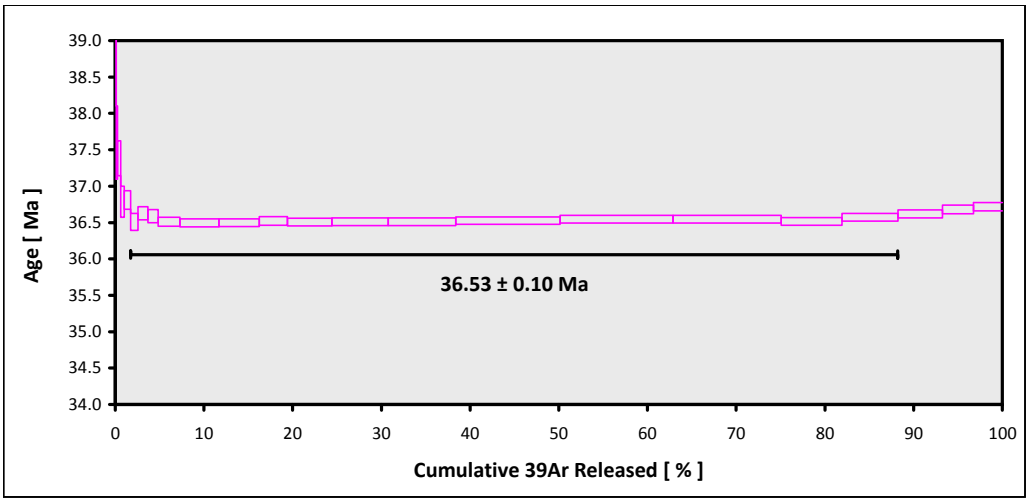
EXP#16D16131 > MV1203-D24-03 > K-Feldspar > MV1203 (13-INT-04)
WALVIS RIDGE > COLERIDGE GUYOT
15-OSU-07 (7B10-15) > Incremental Heating > Susan Schnur

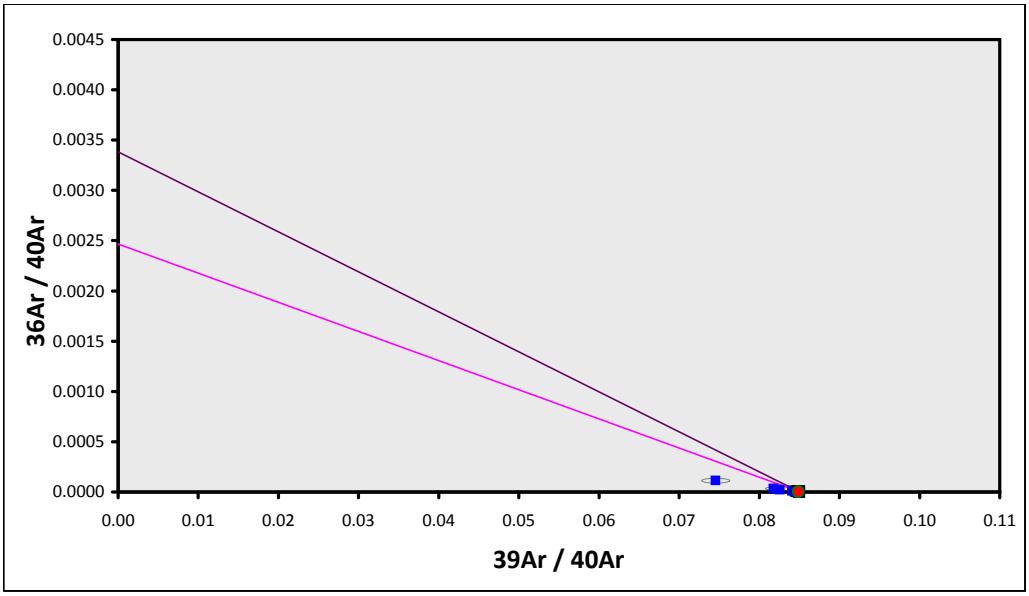
Information on Analysis and Constants Used in Calculations

Project = **MV1203 (13-INT-04)**
Sample = **MV1203-D24-03**
Material = **K-Feldspar**
Location = **Coleridge Guyot**
Region = **Walvis Ridge**
Analyst = **Susan Schnur**
Irradiation = **15-OSU-07 (7B10-15)**
Position = **X: 0 | Y: 0 | Z/H: 16.83 mm**
FCT-NM Age = **28.201 ± 0.023 Ma**
FCT-NM Reference = **Kuiper et al (2008)**
FCT-NM 40Ar/39Ar Ratio = **9.05616 ± 0.01286**
FCT-NM J-value = **0.00173555 ± 0.00000246**
Air Shot 40Ar/36Ar = **304.5130 ± 0.4872**
Air Shot MDF = **0.99259092 ± 0.00069462 (LIN)**
Experiment Type = **Incremental Heating**
Extraction Method = **Bulk Laser Heating**
Heating = **77 sec**
Isolation = **1.50 min**
Instrument = **ARGUS-VI-D**
Preferred Age = **Plateau Age**
Age Classification = **Eruption Age**
IGSN = **IESRS0091**
Rock Class = **Igneous>Volcanic>Mafic**
Lithology = **Trachyte**
Lat-Lon = **34°47.9'S - 5°03.8'W**
Age Equations = **Min et al. (2000)**
Negative Intensities = **Allowed**
Collector Calibrations = **36Ar**
Decay 40K = **5.530 ± 0.048 E-10 1/a**
Decay 39Ar = **2.940 ± 0.016 E-07 1/h**
Decay 37Ar = **8.230 ± 0.012 E-04 1/h**
Decay 36Cl = **2.257 ± 0.015 E-06 1/a**
Decay 40K(EC,β^+) = **0.580 ± 0.009 E-10 1/a**
Decay 40K(β^-) = **4.950 ± 0.043 E-10 1/a**
Atmospheric 40/36(a) = **295.50**
Atmospheric 38/36(a) = **0.1869**
Production 39/37(ca) = **0.0006756 ± 0.0000089**
Production 38/37(ca) = **0.0000718 ± 0.0000092**
Production 36/37(ca) = **0.0002663 ± 0.0000004**
Production 40/39(k) = **0.003823 ± 0.000102**
Production 38/39(k) = **0.012031 ± 0.000019**
Production 36/38(cl) = **262.80 ± 1.71**
Scaling Ratio K/Ca = **0.430**
Abundance Ratio 40K/K = **1.1700 ± 0.0100 E-04**
Atomic Weight K = **39.0983 ± 0.0001 g**

Good plateau

Results	40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD	39Ar(k) (%,n)	K/Ca ± 2σ
Age Plateau		11.75708 ± 0.00510 ± 0.04%	**36.53 ± 0.10 ± 0.28%**	1.09 36%	86.49 15	21.1 ± 1.7
			Full External Error ± 0.83	1.76	2σ Confidence Limit	
			Analytical Error ± 0.02	1.0432	Error Magnification	
Total Fusion Age		11.76661 ± 0.00480 ± 0.04%	**36.56 ± 0.10 ± 0.28%**		23	22.4 ± 2.4
			Full External Error ± 0.83			
			Analytical Error ± 0.01			
Normal Isochron	**259.11 ± 323.41 ########**	11.75888 ± 0.01692 ± 0.14%	**36.53 ± 0.12 ± 0.32%**	1.08 37%	86.49 15	
			Full External Error ± 0.83	1.78	2σ Confidence Limit	
			Analytical Error ± 0.05	1.0393	Error Magnification	
Inverse Isochron Clustered Points	**405.50 ± 193.66 ± 47.76%**	11.75156 ± 0.01728 ± 0.15%	**36.51 ± 0.12 ± 0.32%**	1.13 32%	86.49 15	
			Full External Error ± 0.83	1.78	2σ Confidence Limit	
			Analytical Error ± 0.05	1.0645	Error Magnification	
				0%	Spreading Factor	





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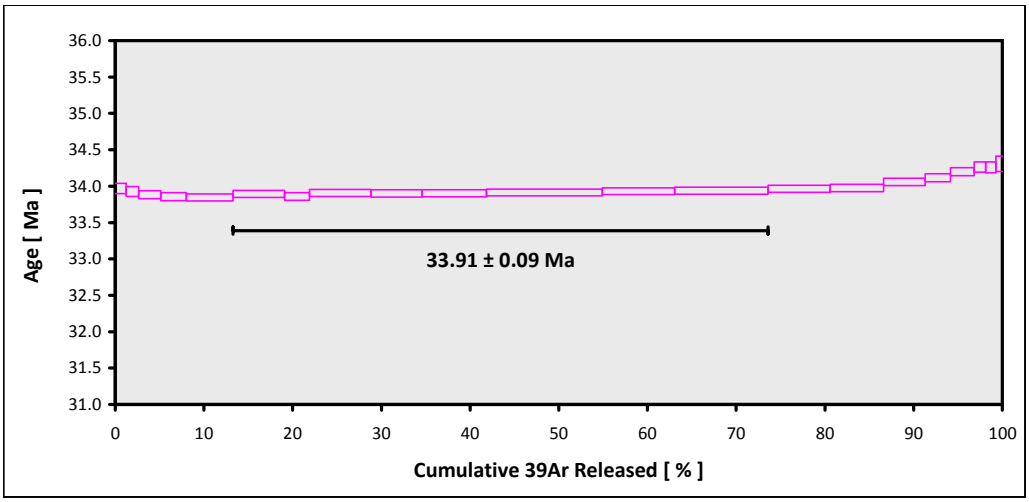
EXP#16D16167 > MV1203-D27-08 > K-Feldspar > MV1203 (13-INT-04)
WALVIS RIDGE > RIGHT GUYOT
15-OSU-07 (7B16-15) > Incremental Heating > Susan Schnur

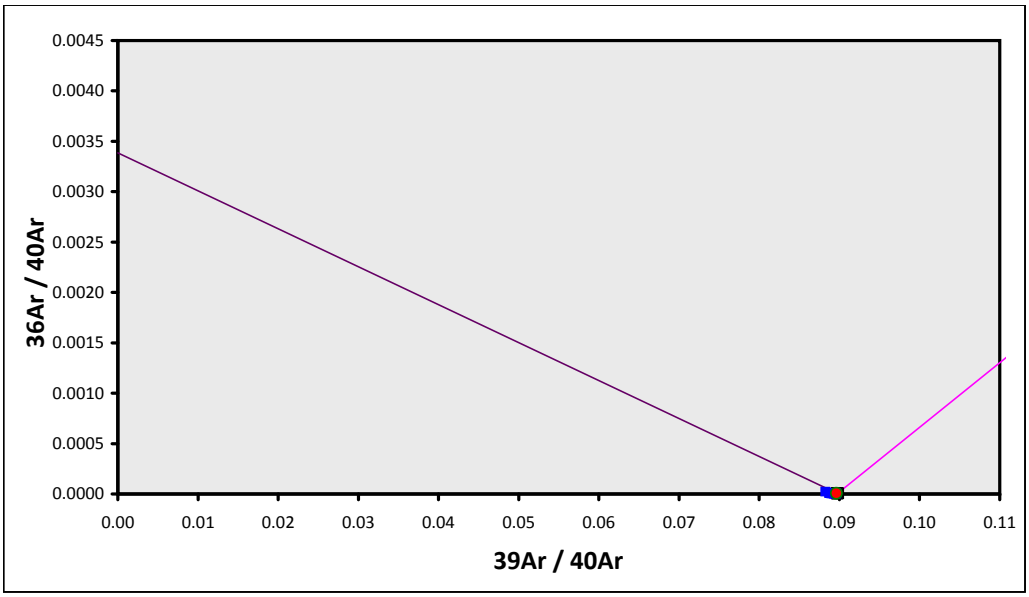
Information on Analysis and Constants Used in Calculations

Project = **MV1203 (13-INT-04)**
Sample = **MV1203-D27-08**
Material = **K-Feldspar**
Location = **Right Guyot**
Region = **Walvis Ridge**
Analyst = **Susan Schnur**
Irradiation = **15-OSU-07 (7B16-15)**
Position = **X: 0 | Y: 0 | Z/H: 27.61 mm**
FCT-NM Age = **28.201 ± 0.023 Ma**
FCT-NM Reference = **Kuiper et al (2008)**
FCT-NM 40Ar/39Ar Ratio = **9.23886 ± 0.01284**
FCT-NM J-value = **0.00170123 ± 0.00000236**
Air Shot 40Ar/36Ar = **304.5220 ± 0.4872**
Air Shot MDF = **0.99258374 ± 0.00069460 (LIN)**
Experiment Type = **Incremental Heating**
Extraction Method = **Bulk Laser Heating**
Heating = **77 sec**
Isolation = **1.50 min**
Instrument = **ARGUS-VI-D**
Preferred Age = **Plateau Age**
Age Classification = **Eruption Age**
IGSN = **IESRS0092**
Rock Class = **Igneous>Volcanic>Mafic**
Lithology = **Trachyte**
Lat-Lon = **35°36.4'S - 5°41.4'W**
Age Equations = **Min et al. (2000)**
Negative Intensities = **Allowed**
Collector Calibrations = **36Ar**
Decay 40K = **5.530 ± 0.048 E-10 1/a**
Decay 39Ar = **2.940 ± 0.016 E-07 1/h**
Decay 37Ar = **8.230 ± 0.012 E-04 1/h**
Decay 36Cl = **2.257 ± 0.015 E-06 1/a**
Decay 40K(EC,β^+) = **0.580 ± 0.009 E-10 1/a**
Decay 40K(β^-) = **4.950 ± 0.043 E-10 1/a**
Atmospheric 40/36(a) = **295.50**
Atmospheric 38/36(a) = **0.1869**
Production 39/37(ca) = **0.0006756 ± 0.0000089**
Production 38/37(ca) = **0.0000718 ± 0.0000092**
Production 36/37(ca) = **0.0002663 ± 0.0000004**
Production 40/39(k) = **0.003823 ± 0.000102**
Production 38/39(k) = **0.012031 ± 0.000019**
Production 36/38(cl) = **262.80 ± 1.71**
Scaling Ratio K/Ca = **0.430**
Abundance Ratio 40K/K = **1.1700 ± 0.0100 E-04**
Atomic Weight K = **39.0983 ± 0.0001 g**

Good plateau

Results	40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD	39Ar(k) (%,n)	K/Ca ± 2σ
Age Plateau		11.12555 ± 0.00571	**33.91 ± 0.09**	0.95	60.29	64 ± 9
		± 0.05%	**± 0.28%**	47%	8	
		Full External Error	± 0.77	2.07	2σ Confidence Limit	
		Analytical Error	± 0.02	1.0000	Error Magnification	
Total Fusion Age		11.13876 ± 0.00426	**33.95 ± 0.09**		21	64 ± 9
		± 0.04%	**± 0.28%**			
		Full External Error	± 0.77			
		Analytical Error	± 0.01			
Normal Isochron	205.04 ± 468.05	11.15144 ± 0.02466	**33.98 ± 0.12**	0.48	60.29	
	########	± 0.22%	**± 0.35%**	83%	8	
		Full External Error	± 0.77	2.15	2σ Confidence Limit	
		Analytical Error	± 0.07	1.0000	Error Magnification	
Inverse Isochron	173.90 ± 187.91	11.14959 ± 0.02461	**33.98 ± 0.12**	0.49	60.29	
Clustered Points	########	± 0.22%	**± 0.35%**	81%	8	
		Full External Error	± 0.77	2.15	2σ Confidence Limit	
		Analytical Error	± 0.07	1.0000	Error Magnification	
				0%	Spreading Factor	





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

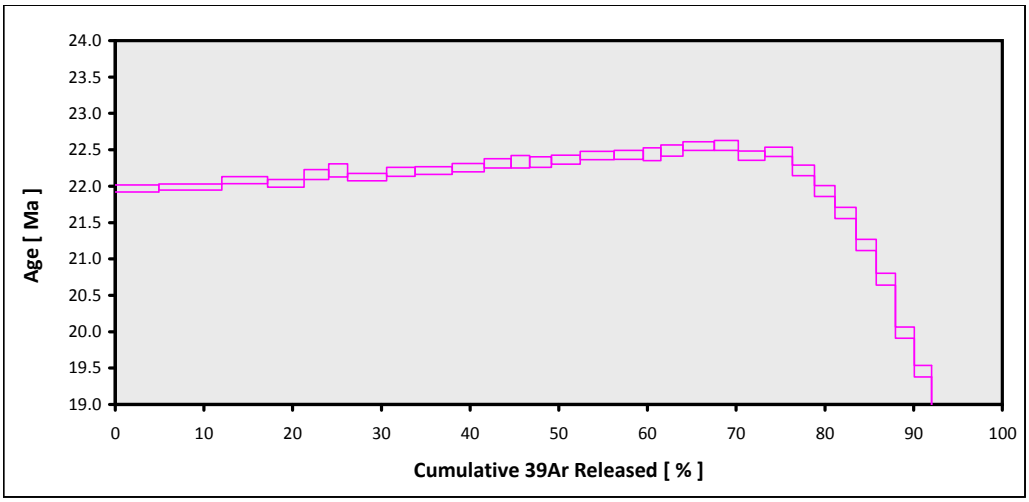
EXP#16D16227 > MV1203-D39-01A (DARK) > Groundmass > MV1203 (13-INT-04)
WALVIS RIDGE > RISSO SEAMOUNT
15-OSU-07 (7B20-15) > Incremental Heating > Susan Schnur

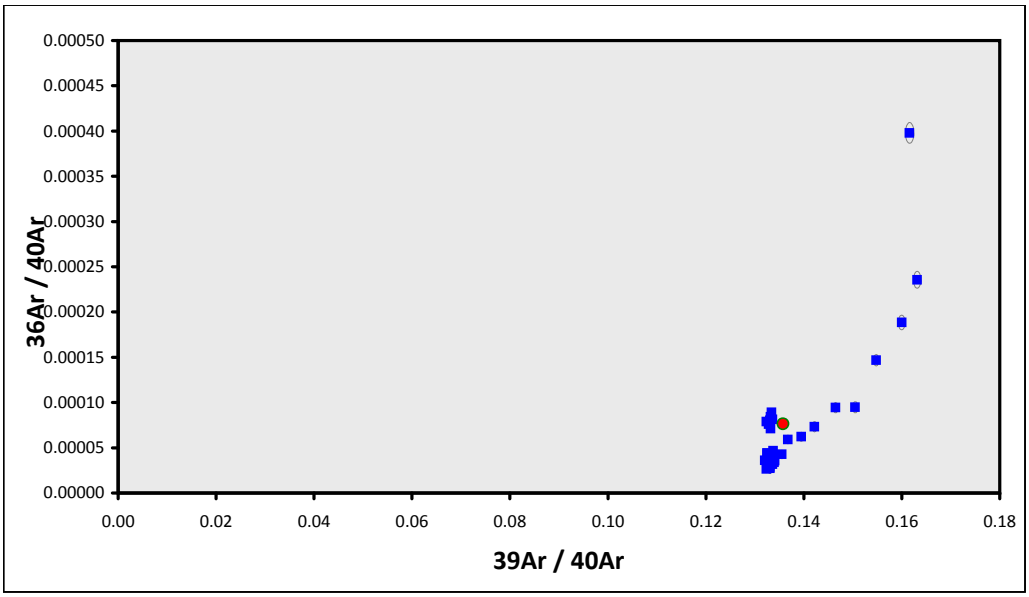
Information on Analysis and Constants Used in Calculations

Project = **MV1203 (13-INT-04)**
Sample = **MV1203-D39-01A (DARK)**
Material = **Groundmass**
Location = **Risso Seamount**
Region = **Walvis Ridge**
Analyst = **Susan Schnur**
Irradiation = **15-OSU-07 (7B20-15)**
Position = **X: 0 | Y: 0 | Z/H: 34.4 mm**
FCT-NM Age = **28.201 ± 0.023 Ma**
FCT-NM Reference = **Kuiper et al (2008)**
FCT-NM 40Ar/39Ar Ratio = **9.38353 ± 0.01286**
FCT-NM J-value = **0.00167500 ± 0.00000229**
Air Shot 40Ar/36Ar = **304.5260 ± 0.4872**
Air Shot MDF = **0.99258055 ± 0.00069459 (LIN)**
Experiment Type = **Incremental Heating**
Extraction Method = **Bulk Laser Heating**
Heating = **77 sec**
Isolation = **3.00 min**
Instrument = **ARGUS-VI-D**
Preferred Age = Undefined
Age Classification = Undefined
IGSN = **IESRS0093**
Rock Class = **Igneous>Volcanic>Mafic**
Lithology = **Tephrite**
Lat-Lon = **38°15.5'S - 8°11.3'W**
Age Equations = **Min et al. (2000)**
Negative Intensities = **Allowed**
Collector Calibrations = **36Ar**
Decay 40K = **5.530 ± 0.048 E-10 1/a**
Decay 39Ar = **2.940 ± 0.016 E-07 1/h**
Decay 37Ar = **8.230 ± 0.012 E-04 1/h**
Decay 36Cl = **2.257 ± 0.015 E-06 1/a**
Decay 40K(EC,β^+) = **0.580 ± 0.009 E-10 1/a**
Decay 40K(β^-) = **4.950 ± 0.043 E-10 1/a**
Atmospheric 40/36(a) = **295.50**
Atmospheric 38/36(a) = **0.1869**
Production 39/37(ca) = **0.0006756 ± 0.0000089**
Production 38/37(ca) = **0.0000718 ± 0.0000092**
Production 36/37(ca) = **0.0002663 ± 0.0000004**
Production 40/39(k) = **0.003823 ± 0.000102**
Production 38/39(k) = **0.012031 ± 0.000019**
Production 36/38(cl) = **262.80 ± 1.71**
Scaling Ratio K/Ca = **0.430**
Abundance Ratio 40K/K = **1.1700 ± 0.0100 E-04**
Atomic Weight K = **39.0983 ± 0.0001 g**

Upward slanting then drops off at high-T, no clear plateau.

Results	40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD	39Ar(k) (%,n)	K/Ca ± 2σ
Age Plateau						
Cannot Calculate						
Total Fusion Age		7.19869 ± 0.00387 ± 0.05%	**21.67 ± 0.06 ± 0.28%**		37	0.452 ± 0.003
			Full External Error ± 0.49			
			Analytical Error ± 0.01			
Normal Isochron						
Cannot Calculate						
Inverse Isochron						
Cannot Calculate						





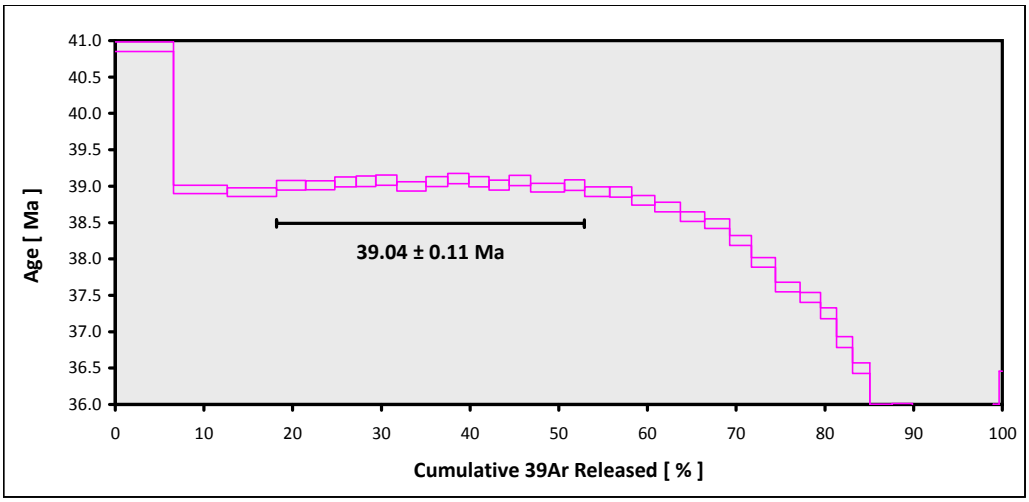
EXP#16D16281 > MV1203-D22-05 > Groundmass > MV1203 (13-INT-04)
WALVIS RIDGE > RACHEL SEAMOUNT
15-OSU-07 (7B2-15) > Incremental Heating > Susan Schnur

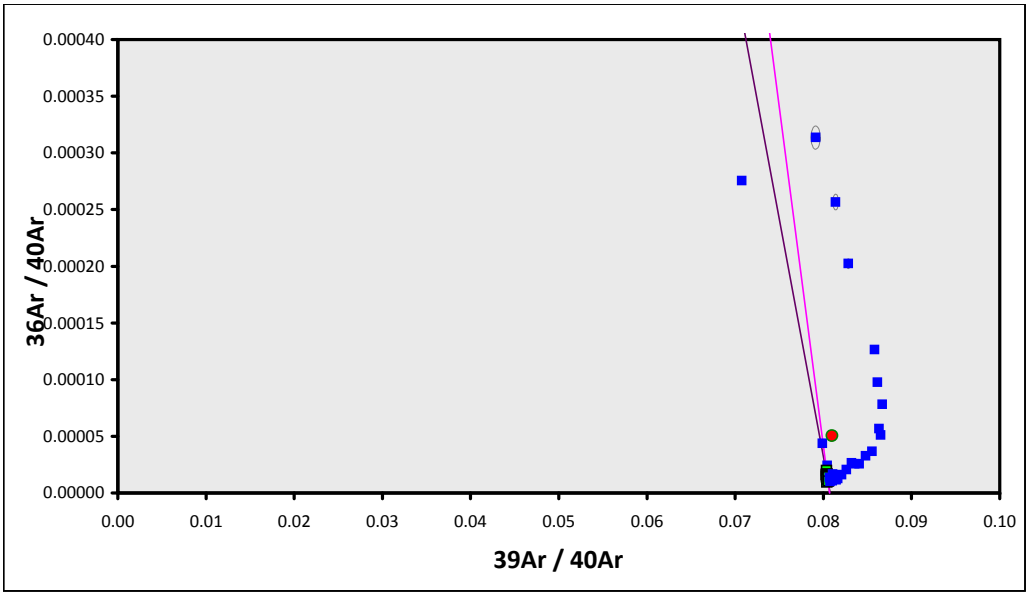
Information on Analysis and Constants Used in Calculations

Project = **MV1203 (13-INT-04)**
Sample = **MV1203-D22-05**
Material = **Groundmass**
Location = **Rachel Seamount**
Region = **Walvis Ridge**
Analyst = **Susan Schnur**
Irradiation = **15-OSU-07 (7B2-15)**
Position = **X: 0 | Y: 0 | Z/H: 4.24 mm**
FCT-NM Age = **28.201 ± 0.023 Ma**
FCT-NM Reference = **Kuiper et al (2008)**
FCT-NM 40Ar/39Ar Ratio = **8.91573 ± 0.01284**
FCT-NM J-value = **0.00176288 ± 0.00000254**
Air Shot 40Ar/36Ar = **304.5280 ± 0.4872**
Air Shot MDF = **0.99257895 ± 0.00069459 (LIN)**
Experiment Type = **Incremental Heating**
Extraction Method = **Bulk Laser Heating**
Heating = **77 sec**
Isolation = **3.00 min**
Instrument = **ARGUS-VI-D**
Preferred Age = **Plateau Age**
Age Classification = **Eruption Age**
IGSN = **IESRS0094**
Rock Class = **Igneous>Volcanic>Mafic**
Lithology = **Tephrite**
Lat-Lon = **33°18.2'S - 3°52.3'W**
Age Equations = **Min et al. (2000)**
Negative Intensities = **Allowed**
Collector Calibrations = **36Ar**
Decay 40K = **5.530 ± 0.048 E-10 1/a**
Decay 39Ar = **2.940 ± 0.016 E-07 1/h**
Decay 37Ar = **8.230 ± 0.012 E-04 1/h**
Decay 36Cl = **2.257 ± 0.015 E-06 1/a**
Decay 40K(EC,β^+) = **0.580 ± 0.009 E-10 1/a**
Decay 40K(β^-) = **4.950 ± 0.043 E-10 1/a**
Atmospheric 40/36(a) = **295.50**
Atmospheric 38/36(a) = **0.1869**
Production 39/37(ca) = **0.0006756 ± 0.0000089**
Production 38/37(ca) = **0.0000718 ± 0.0000092**
Production 36/37(ca) = **0.0002663 ± 0.0000004**
Production 40/39(k) = **0.003823 ± 0.000102**
Production 38/39(k) = **0.012031 ± 0.000019**
Production 36/38(cl) = **262.80 ± 1.71**
Scaling Ratio K/Ca = **0.430**
Abundance Ratio 40K/K = **1.1700 ± 0.0100 E-04**
Atomic Weight K = **39.0983 ± 0.0001 g**

Steps form wavy pattern, mid-T yields a slightly bumpy but acceptable plateau.

Results	40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD	39Ar(k) (%,n)	K/Ca ± 2σ
Age Plateau		12.37940 ± 0.00692	**39.04 ± 0.11**	1.32	34.74	0.478 ± 0.035
		± 0.06%	**± 0.29%**	20%	13	
		Full External Error	± 0.88	1.82	2σ Confidence Limit	
		Analytical Error	± 0.02	1.1501	Error Magnification	
Total Fusion Age		12.16135 ± 0.00374	**38.36 ± 0.11**		37	0.402 ± 0.001
		± 0.03%	**± 0.29%**			
		Full External Error	± 0.87			
		Analytical Error	± 0.01			
Normal Isochron	**170.86 ± 203.78**	12.40082 ± 0.03558	**39.11 ± 0.16**	1.37	34.74	
	**######## **	± 0.29%	**± 0.40%**	18%	13	
		Full External Error	± 0.89	1.85	2σ Confidence Limit	
		Analytical Error	± 0.11	1.1702	Error Magnification	
Inverse Isochron	**207.36 ± 108.19**	12.39456 ± 0.03545	**39.09 ± 0.16**	1.36	34.74	
Clustered Points	**± 52.17%**	± 0.29%	**± 0.40%**	19%	13	
		Full External Error	± 0.89	1.85	2σ Confidence Limit	
		Analytical Error	± 0.11	1.1650	Error Magnification	
				0%	Spreading Factor	





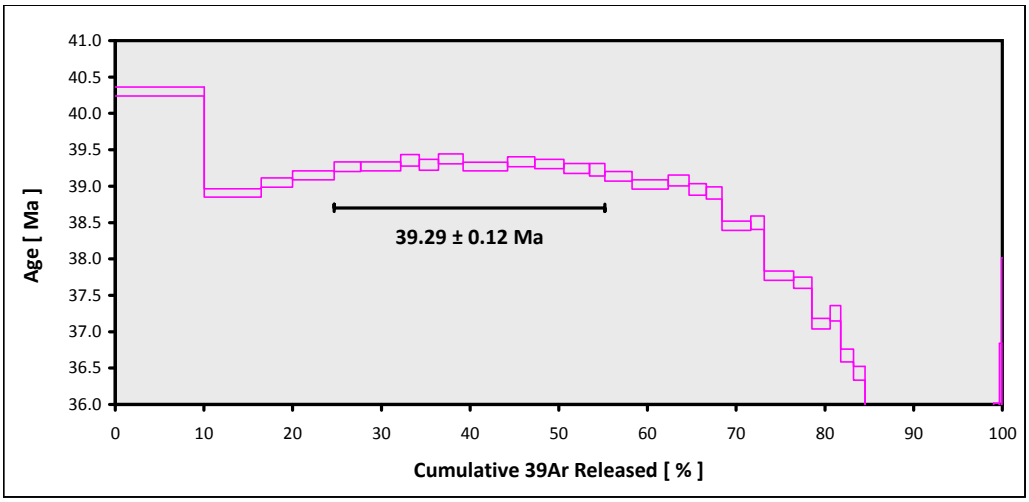
EXP#16D16335 > MV1203-D22-10A > Groundmass > MV1203 (13-INT-04)
WALVIS RIDGE > RACHEL SEAMOUNT
15-OSU-07 (7B3-15) > Incremental Heating > Susan Schnur

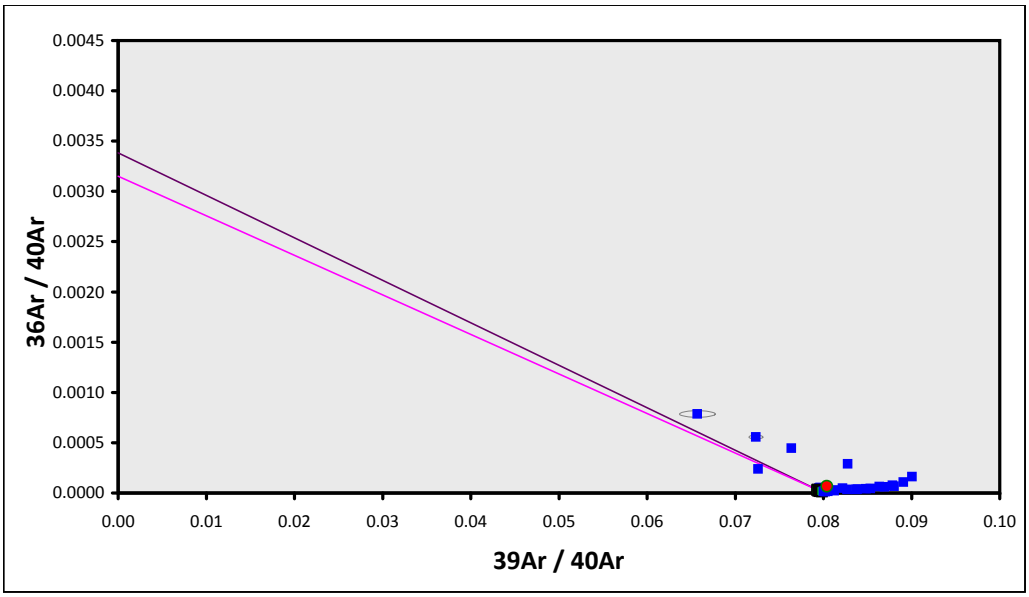
Information on Analysis and Constants Used in Calculations

Project = **MV1203 (13-INT-04)**
Sample = **MV1203-D22-10A**
Material = **Groundmass**
Location = **Rachel Seamount**
Region = **Walvis Ridge**
Analyst = **Susan Schnur**
Irradiation = **15-OSU-07 (7B3-15)**
Position = **X: 0 | Y: 0 | Z/H: 6.36 mm**
FCT-NM Age = **28.201 ± 0.023 Ma**
FCT-NM Reference = **Kuiper et al (2008)**
FCT-NM 40Ar/39Ar Ratio = **8.93387 ± 0.01286**
FCT-NM J-value = **0.00175930 ± 0.00000253**
Air Shot 40Ar/36Ar = **304.5230 ± 0.4842**
Air Shot MDF = **0.99258294 ± 0.00069324 (LIN)**
Experiment Type = **Incremental Heating**
Extraction Method = **Bulk Laser Heating**
Heating = **77 sec**
Isolation = **3.00 min**
Instrument = **ARGUS-VI-D**
Preferred Age = **Plateau Age**
Age Classification = **Eruption Age**
IGSN = **IESRS0095**
Rock Class = **Igneous>Volcanic>Mafic**
Lithology = **Tephrite**
Lat-Lon = **33°18.2'S - 3°52.3'W**
Age Equations = **Min et al. (2000)**
Negative Intensities = **Allowed**
Collector Calibrations = **36Ar**
Decay 40K = **5.530 ± 0.048 E-10 1/a**
Decay 39Ar = **2.940 ± 0.016 E-07 1/h**
Decay 37Ar = **8.230 ± 0.012 E-04 1/h**
Decay 36Cl = **2.257 ± 0.015 E-06 1/a**
Decay 40K(EC,β^+) = **0.580 ± 0.009 E-10 1/a**
Decay 40K(β^-) = **4.950 ± 0.043 E-10 1/a**
Atmospheric 40/36(a) = **295.50**
Atmospheric 38/36(a) = **0.1869**
Production 39/37(ca) = **0.0006756 ± 0.0000089**
Production 38/37(ca) = **0.0000718 ± 0.0000092**
Production 36/37(ca) = **0.0002663 ± 0.0000004**
Production 40/39(k) = **0.003823 ± 0.000102**
Production 38/39(k) = **0.012031 ± 0.000019**
Production 36/38(cl) = **262.80 ± 1.71**
Scaling Ratio K/Ca = **0.430**
Abundance Ratio 40K/K = **1.1700 ± 0.0100 E-04**
Atomic Weight K = **39.0983 ± 0.0001 g**

Steps form wavy pattern, mid-T yields a slightly bumpy but acceptable plateau.

Results	40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD	39Ar(k) (%,n)	K/Ca ± 2σ
Age Plateau		12.48628 ± 0.00927 (± 0.07%)	**39.29 ± 0.12 (± 0.29%)**	1.77	30.51	0.409 ± 0.055
		Full External Error ± 0.89		7%	10	
		Analytical Error ± 0.03		1.94	2σ Confidence Limit	
				1.3295	Error Magnification	
Total Fusion Age		12.18798 ± 0.00414 (± 0.03%)	**38.36 ± 0.11 (± 0.29%)**		37	0.363 ± 0.001
		Full External Error ± 0.87				
		Analytical Error ± 0.01				
Normal Isochron	**354.69 ± 127.91 (± 36.06%)**	12.46903 ± 0.03602 (± 0.29%)	**39.24 ± 0.16 (± 0.40%)**	2.02	30.51	
Error Chron		Full External Error ± 0.90		4%	10	
		Analytical Error ± 0.11		2.00	2σ Confidence Limit	
				1.4221	Error Magnification	
Inverse Isochron	**317.34 ± 110.91 (± 34.95%)**	12.48042 ± 0.03529 (± 0.28%)	**39.28 ± 0.16 (± 0.40%)**	1.96	30.51	
Clustered Points		Full External Error ± 0.90		5%	10	
		Analytical Error ± 0.11		2.00	2σ Confidence Limit	
				1.4003	Error Magnification	
				1%	Spreading Factor	





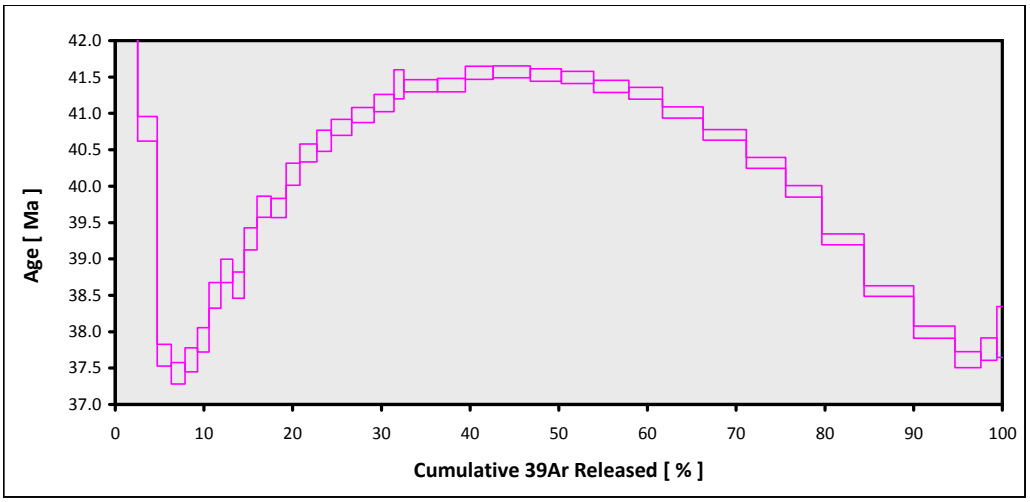
EXP#16D16416 > MV1203-D23-01 > Groundmass > MV1203 (13-INT-04)
WALVIS RIDGE > WUST GUYOT
15-OSU-07 (7B4-15) > Incremental Heating > Susan Schnur

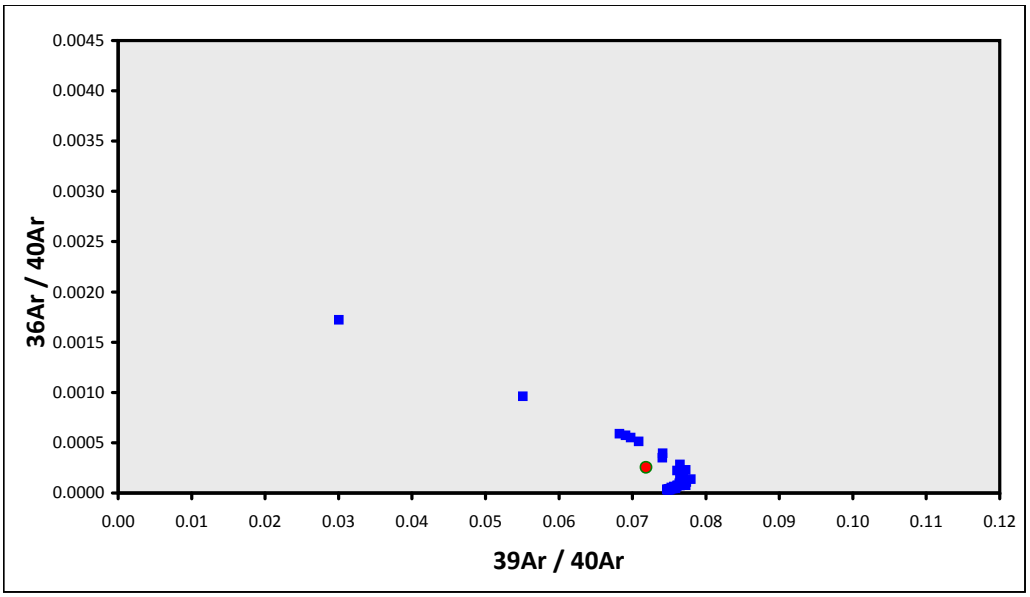
Information on Analysis and Constants Used in Calculations

Project = **MV1203 (13-INT-04)**
Sample = **MV1203-D23-01**
Material = **Groundmass**
Location = **Wust Guyot**
Region = **Walvis Ridge**
Analyst = **Susan Schnur**
Irradiation = **15-OSU-07 (7B4-15)**
Position = **X: 0 | Y: 0 | Z/H: 8.5 mm**
FCT-NM Age = **28.201 ± 0.023 Ma**
FCT-NM Reference = **Kuiper et al (2008)**
FCT-NM 40Ar/39Ar Ratio = **8.95445 ± 0.01289**
FCT-NM J-value = **0.00175526 ± 0.00000253**
Air Shot 40Ar/36Ar = **304.5290 ± 0.4842**
Air Shot MDF = **0.99257815 ± 0.00069323 (LIN)**
Experiment Type = **Incremental Heating**
Extraction Method = **Bulk Laser Heating**
Heating = **77 sec**
Isolation = **3.00 min**
Instrument = **ARGUS-VI-D**
Preferred Age = Undefined
Age Classification = Undefined
IGSN = **IESRS0096**
Rock Class = **Igneous>Volcanic>Mafic**
Lithology = **Basalt**
Lat-Lon = **34°13.4'S - 3°46.2'W**
Age Equations = **Min et al. (2000)**
Negative Intensities = **Allowed**
Collector Calibrations = **36Ar**
Decay 40K = **5.530 ± 0.048 E-10 1/a**
Decay 39Ar = **2.940 ± 0.016 E-07 1/h**
Decay 37Ar = **8.230 ± 0.012 E-04 1/h**
Decay 36Cl = **2.257 ± 0.015 E-06 1/a**
Decay 40K(EC,β^+) = **0.580 ± 0.009 E-10 1/a**
Decay 40K(β^-) = **4.950 ± 0.043 E-10 1/a**
Atmospheric 40/36(a) = **295.50**
Atmospheric 38/36(a) = **0.1869**
Production 39/37(ca) = **0.0006756 ± 0.0000089**
Production 38/37(ca) = **0.0000718 ± 0.0000092**
Production 36/37(ca) = **0.0002663 ± 0.0000004**
Production 40/39(k) = **0.003823 ± 0.000102**
Production 38/39(k) = **0.012031 ± 0.000019**
Production 36/38(cl) = **262.80 ± 1.71**
Scaling Ratio K/Ca = **0.430**
Abundance Ratio 40K/K = **1.1700 ± 0.0100 E-04**
Atomic Weight K = **39.0983 ± 0.0001 g**

Excess argon, but small plateau that likely represents the correct age.

Results	40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD	39Ar(k) (%,n)	K/Ca ± 2σ
Age Plateau Cannot Calculate						
Total Fusion Age		12.86330 ± 0.00630 ± 0.05%	**40.37 ± 0.12 ± 0.29%** Full External Error ± 0.91 Analytical Error ± 0.02		37	0.250 ± 0.001
Normal Isochron Cannot Calculate						
Inverse Isochron Cannot Calculate						





EXP#16D16470 > MV1203-D23-13A > Groundmass > MV1203 (13-INT-04)
WALVIS RIDGE > WUST GUYOT
15-OSU-07 (7B6-15) > Incremental Heating > Susan Schnur

Information on Analysis and Constants Used in Calculations

Project = **MV1203 (13-INT-04)**
Sample = **MV1203-D23-13A**
Material = **Groundmass**
Location = **Wust Guyot**
Region = **Walvis Ridge**
Analyst = **Susan Schnur**
Irradiation = **15-OSU-07 (7B6-15)**
Position = **X: 0 | Y: 0 | Z/H: 11.11 mm**
FCT-NM Age = **28.201 ± 0.023 Ma**
FCT-NM Reference = **Kuiper et al (2008)**
FCT-NM 40Ar/39Ar Ratio = **8.98261 ± 0.01285**
FCT-NM J-value = **0.00174976 ± 0.00000250**
Air Shot 40Ar/36Ar = **304.5310 ± 0.4842**
Air Shot MDF = **0.99257656 ± 0.00069322 (LIN)**
Experiment Type = **Incremental Heating**
Extraction Method = **Bulk Laser Heating**
Heating = **77 sec**
Isolation = **3.00 min**
Instrument = **ARGUS-VI-D**
Preferred Age = Undefined
Age Classification = Undefined
IGSN = **IESRS0097**
Rock Class = **Igneous>Volcanic>Mafic**
Lithology = **Trachybasalt**
Lat-Lon = **34°13.4'S - 3°46.2'W**
Age Equations = **Min et al. (2000)**
Negative Intensities = **Allowed**
Collector Calibrations = **36Ar**
Decay 40K = **5.530 ± 0.048 E-10 1/a**
Decay 39Ar = **2.940 ± 0.016 E-07 1/h**
Decay 37Ar = **8.230 ± 0.012 E-04 1/h**
Decay 36Cl = **2.257 ± 0.015 E-06 1/a**
Decay 40K(EC,β^+) = **0.580 ± 0.009 E-10 1/a**
Decay 40K(β^-) = **4.950 ± 0.043 E-10 1/a**
Atmospheric 40/36(a) = **295.50**
Atmospheric 38/36(a) = **0.1869**
Production 39/37(ca) = **0.0006756 ± 0.0000089**
Production 38/37(ca) = **0.0000718 ± 0.0000092**
Production 36/37(ca) = **0.0002663 ± 0.0000004**
Production 40/39(k) = **0.003823 ± 0.000102**
Production 38/39(k) = **0.012031 ± 0.000019**
Production 36/38(cl) = **262.80 ± 1.71**
Scaling Ratio K/Ca = **0.430**
Abundance Ratio 40K/K = **1.1700 ± 0.0100 E-04**
Atomic Weight K = **39.0983 ± 0.0001 g**

Excess argon, but small plateau that likely represents the correct age.

Results	40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD	39Ar(k) (%,n)	K/Ca ± 2σ
Age Plateau						
Cannot Calculate						
Total Fusion Age		12.61931 ± 0.00545 ± 0.04%	**39.49 ± 0.11 ± 0.29%**		37	0.263 ± 0.001
			Full External Error ± 0.89			
			Analytical Error ± 0.02			
Normal Isochron						
Cannot Calculate						
Inverse Isochron						
Cannot Calculate