

EXP#18D25589 > 184-MCB-DRJ-17 > Groundmass > MCCLAUGHRY (18-09)
EASTERN CASCADES > MILL CREEK BUTTES
18-OSU-04 (4C15-18) > Incremental Heating > Dan Miggins

**Information on Analysis
and Constants Used in Calculations**

Project = MCCLAUGHRY (18-09)
Sample = 184-MCB-DRJ-17
Material = Groundmass
Location = Mill Creek Buttes
Region = Eastern Cascades
Analyst = Dan Miggins
Irradiation = 18-OSU-04 (4C15-18)
Position = X: 999 | Y: 999 | Z/H: 25.13 mm
FCT-NM Age = 28.201 ± 0.023 Ma
FCT-NM Reference = Kuiper et al (2008)
FCT-NM 40Ar/39Ar Ratio = 9.95299 ± 0.00746
FCT-NM J-value = 0.00157916 ± 0.00000118
Air Shot 40Ar/36Ar = 305.7990 ± 0.3089
Air Shot MDF = 0.99156937 ± 0.00062317 (LIN)
Experiment Type = Incremental Heating
Extraction Method = Bulk Laser Heating
Heating = 64 sec
Isolation = 5.10 min
Instrument = ARGUS-VI-D
Preferred Age = Plateau Age
Age Classification = Eruption Age
IGSN = Undefined
Rock Class = Undefined
Lithology = Undefined
Lat-Lon = Undefined - Undefined
Age 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) = 291.89 ± 1.26
Atmospheric 38/36(a) = 0.1869
Production 39/37(ca) = 0.0006425 ± 0.0000059
Production 38/37(ca) = 0.0001800 ± 0.0000173
Production 36/37(ca) = 0.0002703 ± 0.0000005
Production 40/39(k) = 0.000607 ± 0.000059
Production 38/39(k) = 0.012077 ± 0.000011
Production 36/38(cl) = 262.80 ± 1.71
Scaling Ratio K/Ca = 0.430
Abundance Ratio 40K/K = 1.1700 ± 0.0100 E-04
Atomic Weight K = 39.0983 ± 0.0001 g

Subatmospheric Initial 40Ar/36Ar = 291.89 ± 0.43 (%SD).

Results	40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD	39Ar(k) (%n)	K/Ca ± 2σ
Age Plateau		1.46862 ± 0.00387 ± 0.26%	4.19 ± 0.01 ± 0.30%	1.59 7%	51.15 15	0.143 ± 0.025
		Full External Error ± 0.10 Analytical Error ± 0.01		1.76 1.2602	2σ Confidence Limit Error Magnification	
Total Fusion Age		1.48734 ± 0.00243 ± 0.16%	4.24 ± 0.01 ± 0.22%		32	0.178 ± 0.000
		Full External Error ± 0.10 Analytical Error ± 0.01				
Normal Isochron	290.50 ± 2.84 ± 0.98%	1.47046 ± 0.00575 ± 0.39%	4.19 ± 0.02 ± 0.42%	1.87 3%	51.15 15	
No Convergence		Full External Error ± 0.10 Analytical Error ± 0.02		1.78 1.3690	2σ Confidence Limit Error Magnification	
Inverse Isochron	290.96 ± 2.87 ± 0.99%	1.46954 ± 0.00578 ± 0.39%	4.19 ± 0.02 ± 0.42%	1.94 2%	51.15 15	
Error Chron		Full External Error ± 0.10 Analytical Error ± 0.02		1.78 1.3919	2σ Confidence Limit Error Magnification	
				54%	Spreading Factor	

