

EXP#18D25357 > 660-MCBJ-16 > Groundmass > MCCLAUGHRY (18-09)
EASTERN CASCADES > MILL CREEK BUTTES
18-OSU-04 (4C14-18) > Incremental Heating > Dan Miggins

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

Project = MCCLAUGHRY (18-09)
Sample = 660-MCBJ-16
Material = Groundmass
Location = Mill Creek Buttes
Region = Eastern Cascades
Analyst = Dan Miggins
Irradiation = 18-OSU-04 (4C14-18)
Position = X: 999 | Y: 999 | Z/H: 23.27 mm
FCT-NM Age = 28.201 ± 0.023 Ma
FCT-NM Reference = Kuiper et al (2008)
FCT-NM 40Ar/39Ar Ratio = 9.93846 ± 0.00745
FCT-NM J-value = 0.00158147 ± 0.00000119
Air Shot 40Ar/36Ar = 305.8780 ± 0.4038
Air Shot MDF = 0.99150690 ± 0.00065604 (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) = 295.50
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

Results	40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD	39Ar(k) (%n)	K/Ca ± 2σ
Age Plateau		2.39197 ± 0.00231 ± 0.10%	6.83 ± 0.01 ± 0.18%	1.42 15%	58.84 13	0.180 ± 0.021
		Full External Error ± 0.15 Analytical Error ± 0.01		1.82 1.1895	2σ Confidence Limit Error Magnification	
Total Fusion Age		2.39990 ± 0.00168 ± 0.07%	6.85 ± 0.01 ± 0.17%		32	0.228 ± 0.001
		Full External Error ± 0.15 Analytical Error ± 0.00				
Normal Isochron	288.94 ± 10.46 ± 3.62%	2.39358 ± 0.00350 ± 0.15%	6.83 ± 0.01 ± 0.21%	1.37 18%	58.84 13	
		Full External Error ± 0.15 Analytical Error ± 0.01		1.85 1.1722	2σ Confidence Limit Error Magnification	
Inverse Isochron	290.39 ± 10.69 ± 3.68%	2.39328 ± 0.00358 ± 0.15%	6.83 ± 0.01 ± 0.21%	1.43 15%	58.84 13	
		Full External Error ± 0.15 Analytical Error ± 0.01		1.85 1.1958	2σ Confidence Limit Error Magnification	
				14%	Spreading Factor	

