

EXP#18D25761 > 51-MCB-DRJ-17 > Amphibole > MCCLAUGHRY (18-09)
EASTERN CASCADES > MILL CREEK BUTTES
18-OSU-04 (4C21-18) > Incremental Heating > Dan Miggins

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

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

