

EXP#18D25647 > HBH-295-17 > Groundmass > MCCLAUGHRY (18-09)
EASTERN CASCADES > SOLDIER CREEK
18-OSU-04 (4C23-18) > Incremental Heating > Dan Miggins

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

Project = MCCLAUGHRY (18-09)
Sample = HBH-295-17
Material = Groundmass
Location = Soldier Creek
Region = Eastern Cascades
Analyst = Dan Miggins
Irradiation = 18-OSU-04 (4C23-18)
Position = X: 999 | Y: 999 | Z/H: 36.78 mm
FCT-NM Age = 28.201 ± 0.023 Ma
FCT-NM Reference = Kuiper et al (2008)
FCT-NM 40Ar/39Ar Ratio = 10.08120 ± 0.00746
FCT-NM J-value = 0.00155908 ± 0.00000115
Air Shot 40Ar/36Ar = 305.7650 ± 0.3088
Air Shot MDF = 0.99159627 ± 0.00062324 (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 = 15.24
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) = 300.23 ± 1.80
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

Excess Initial 40Ar/36Ar = 300.23 ± 0.60 (‰SD).

Results	40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD	39Ar(k) (%n)	K/Ca ± 2σ
Age Plateau		8.83871 ± 0.05382	24.75 ± 0.15	1.61	63.13	0.082 ± 0.005
Error Mean		± 0.61%	± 0.62%	3%	25	
		Full External Error ± 0.58		1.58	2σ Confidence Limit	
		Analytical Error ± 0.15		1.2688	Error Magnification	
Total Fusion Age		8.91082 ± 0.04992	24.95 ± 0.14		34	0.084 ± 0.000
		± 0.56%	± 0.58%			
		Full External Error ± 0.58				
		Analytical Error ± 0.14				
Normal Isochron	300.56 ± 1.97	8.83414 ± 0.10450	24.74 ± 0.29	4.95	63.13	
Error Chron	± 0.65%	± 1.18%	± 1.18%	0%	25	
		Full External Error ± 0.63		1.59	2σ Confidence Limit	
		Analytical Error ± 0.29		2.2247	Error Magnification	
Inverse Isochron	300.55 ± 1.97	8.83743 ± 0.10465	24.75 ± 0.29	4.94	63.13	
Error Chron	± 0.66%	± 1.18%	± 1.19%	0%	25	
		Full External Error ± 0.63		1.59	2σ Confidence Limit	
		Analytical Error ± 0.29		2.2216	Error Magnification	
				39%	Spreading Factor	

