

EXP#20F28811 > 89A MCB-DRJ 18 > Groundmass > MCCLAUGHRY (19-20)
EASTERN CASCADES > BADGER LAKE
20-OSU-04 (4B21-20) > Incremental Heating > Dan Miggins

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

Project = MCCLAUGHRY (19-20)
Sample = 89A MCB-DRJ 18
Material = Groundmass
Location = Badger Lake
Region = Eastern Cascades
Analyst = Dan Miggins
Irradiation = 20-OSU-04 (4B21-20)
Position = X: 0 | Y: 0 | Z/H: 28.44846 mm
FCT-NM Age = 28.201 ± 0.023 Ma
FCT-NM Reference = Kuiper et al (2008)
FCT-NM 40Ar/39Ar Ratio = 9.44576 ± 0.00453
FCT-NM J-value = 0.00164365 ± 0.00000079
Air Shot 40Ar/36Ar = 297.0980 ± 0.3535
Air Shot MDF = 1.00123182 ± 0.00039756 (LIN)
Experiment Type = Incremental Heating
Extraction Method = Bulk Laser Heating
Heating = 64 sec
Isolation = 6.12 min
Instrument = ARGUS-VI-F
Preferred Age = Plateau Age
Age Classification = Crystallization 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 = 5.463 ± 0.107 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 ± 0.014 E-10 1/a
Decay 40K(β⁻) = 4.884 ± 0.099 E-10 1/a
Atmospheric 40/36(a) = 310.24 ± 4.05
Atmospheric 38/36(a) = 0.1885 ± 0.0003
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 = 310.24 ± 1.31 (%SD).

Results	40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD	39Ar(k) (%n)	K/Ca ± 2σ
Age Plateau		0.61011 ± 0.00723	1.83 ± 0.02	4.67	67.04	1.47 ± 0.35
Error Mean		± 1.19%	± 1.19%	0%	15	
		Full External Error ± 0.10		1.76	2σ Confidence Limit	
		Analytical Error ± 0.02		2.1616	Error Magnification	
Total Fusion Age		0.59209 ± 0.00473	1.78 ± 0.01		29	0.64 ± 0.00
		± 0.80%	± 0.80%			
		Full External Error ± 0.09				
		Analytical Error ± 0.01				
Normal Isochron	310.31 ± 7.78	0.60667 ± 0.00965	1.82 ± 0.03	11.59	67.04	
Error Chron	± 2.51%	± 1.59%	± 1.59%	0%	15	
		Full External Error ± 0.10		1.78	2σ Confidence Limit	
		Analytical Error ± 0.03		3.4045	Error Magnification	
Inverse Isochron	310.36 ± 8.06	0.60744 ± 0.01000	1.83 ± 0.03	12.23	67.04	
Error Chron	± 2.60%	± 1.65%	± 1.65%	0%	15	
		Full External Error ± 0.10		1.78	2σ Confidence Limit	
		Analytical Error ± 0.03		3.4974	Error Magnification	
				66%	Spreading Factor	

