

EXP#20F28739 > 84 DRBLJ 19 > Groundmass > MCCLAUGHRY (19-20)
EASTERN CASCADES > BADGER LAKE
20-OSU-04 (4B19-20) > Incremental Heating > Dan Miggins

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

Project = **MCCLAUGHRY (19-20)**
Sample = **84 DRBLJ 19**
Material = **Groundmass**
Location = **Badger Lake**
Region = **Eastern Cascades**
Analyst = **Dan Miggins**
Irradiation = **20-OSU-04 (4B19-20)**
Position = **X: 0 | Y: 0 | Z/H: 25.41152 mm**
FCT-NM Age = **28.201 ± 0.023 Ma**
FCT-NM Reference = **Kuiper et al (2008)**
FCT-NM 40Ar/39Ar Ratio = **9.41742 ± 0.00452**
FCT-NM J-value = **0.00164859 ± 0.00000079**
Air Shot 40Ar/36Ar = **299.1310 ± 0.3470**
Air Shot MDF = **0.99952217 ± 0.00038925 (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) = **165.85 ± 18.21**
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**

Subatmospheric Initial 40Ar/36Ar = 165.85 ± 10.98 (%SD).

Results	40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD	39Ar(k) (%n)	K/Ca ± 2σ
Age Plateau		0.80982 ± 0.00771 ± 0.95%	2.44 ± 0.02 ± 0.96%	0.94 49%	73.82 10	0.75 ± 0.15
		Full External Error ± 0.13 Analytical Error ± 0.02		1.94 1.0000	2σ Confidence Limit Error Magnification	
Total Fusion Age		0.86345 ± 0.01225 ± 1.42%	2.60 ± 0.04 ± 1.42%		29	0.80 ± 0.00
		Full External Error ± 0.14 Analytical Error ± 0.04				
Normal Isochron	202.07 ± 22.58 ± 11.17%	0.78388 ± 0.01778 ± 2.27%	2.36 ± 0.05 ± 2.27%	20.16 0%	73.82 10	
No Convergence		Full External Error ± 0.13 Analytical Error ± 0.05		2.00 4.4898	2σ Confidence Limit Error Magnification	
Inverse Isochron	201.07 ± 21.60 ± 10.74%	0.78621 ± 0.01681 ± 2.14%	2.37 ± 0.05 ± 2.14%	19.08 0%	73.82 10	
Error Chron		Full External Error ± 0.13 Analytical Error ± 0.05		2.00 4.3684	2σ Confidence Limit Error Magnification	
				19%	Spreading Factor	

