

EXP#20F28500 > 148 BRHC 19 > Groundmass > MCCLAUGHRY (19-20)
HARNEY BASIN > BURNS BUTTE
20-OSU-04 (4B4-20) > Incremental Heating > Dan Miggins

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

Project = **MCCLAUGHRY (19-20)**
Sample = **148 BRHC 19**
Material = **Groundmass**
Location = **Burns Butte**
Region = **Harney Basin**
Analyst = **Dan Miggins**
Irradiation = **20-OSU-04 (4B4-20)**
Position = **X: 0 | Y: 0 | Z/H: 4.69936 mm**
FCT-NM Age = **28.201 ± 0.023 Ma**
FCT-NM Reference = **Kuiper et al (2008)**
FCT-NM 40Ar/39Ar Ratio = **9.34384 ± 0.00449**
FCT-NM J-value = **0.00166158 ± 0.00000080**
Air Shot 40Ar/36Ar = **297.9410 ± 0.3426**
Air Shot MDF = **1.00052007 ± 0.00038894 (LIN)**
Experiment Type = **Incremental Heating**
Extraction Method = **Bulk Laser Heating**
Heating = **64 sec**
Isolation = **6.12 min**
Instrument = **ARGUS-VI-F**
Preferred Age = **Mini Plateau**
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) = **298.56 ± 0.31**
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**

Results	40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD	39Ar(k) (%n)	K/Ca ± 2σ
Age Plateau		2.78846 ± 0.01124 ± 0.40%	8.46 ± 0.03 ± 0.41%	1.01 43%	25.04 12	12.0 ± 0.5
		Full External Error ± 0.44 Analytical Error ± 0.03		1.85 1.0055	2σ Confidence Limit Error Magnification	
Total Fusion Age		2.73779 ± 0.00478 ± 0.17%	8.31 ± 0.02 ± 0.20%		30	13.4 ± 0.0
		Full External Error ± 0.43 Analytical Error ± 0.01				
Normal Isochron	298.75 ± 0.68 ± 0.23%	2.78391 ± 0.02046 ± 0.73%	8.45 ± 0.06 ± 0.74%	1.41 17%	25.04 12	
		Full External Error ± 0.44 Analytical Error ± 0.06		1.89 1.1869	2σ Confidence Limit Error Magnification	
Inverse Isochron	298.75 ± 0.68 ± 0.23%	2.78382 ± 0.02045 ± 0.73%	8.45 ± 0.06 ± 0.74%	1.41 17%	25.04 12	
		Full External Error ± 0.44 Analytical Error ± 0.06		1.89 1.1873	2σ Confidence Limit Error Magnification	
				35%	Spreading Factor	

