

EXP#20F28619 > F-1-10-3040 > Groundmass > MCCLAUGHRY (19-20)
HARNEY BASIN > BURNS BUTTE
20-OSU-04 (4B7-20) > Incremental Heating > Dan Miggins

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

Project = **MCCLAUGHRY (19-20)**
Sample = **F-1-10-3040**
Material = **Groundmass**
Location = **Burns Butte**
Region = **Harney Basin**
Analyst = **Dan Miggins**
Irradiation = **20-OSU-04 (4B7-20)**
Position = **X: 0 | Y: 0 | Z/H: 8.393235 mm**
FCT-NM Age = **28.201 ± 0.023 Ma**
FCT-NM Reference = **Kuiper et al (2008)**
FCT-NM 40Ar/39Ar Ratio = **9.34095 ± 0.00448**
FCT-NM J-value = **0.00166209 ± 0.00000080**
Air Shot 40Ar/36Ar = **298.9570 ± 0.3438**
Air Shot MDF = **0.99966758 ± 0.00038761 (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) = **296.40 ± 0.51**
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 = 296.40 ± 0.17 (%SD).

Results	40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD	39Ar(k) (%n)	K/Ca ± 2σ
Age Plateau		2.80771 ± 0.00566 ± 0.20%	8.52 ± 0.02 ± 0.22%	1.82 5%	30.43 11	4.70 ± 0.31
		Full External Error ± 0.44 Analytical Error ± 0.02		1.89 1.3506	2σ Confidence Limit Error Magnification	
Total Fusion Age		2.74809 ± 0.00283 ± 0.10%	8.34 ± 0.01 ± 0.14%		29	4.55 ± 0.00
		Full External Error ± 0.43 Analytical Error ± 0.01				
Normal Isochron Error Chron	296.44 ± 1.03 ± 0.35%	2.80751 ± 0.00763 ± 0.27%	8.52 ± 0.02 ± 0.29%	2.54 1%	30.43 11	
		Full External Error ± 0.44 Analytical Error ± 0.02		1.94 1.5943	2σ Confidence Limit Error Magnification	
Inverse Isochron Error Chron	296.40 ± 1.03 ± 0.35%	2.80805 ± 0.00766 ± 0.27%	8.52 ± 0.02 ± 0.29%	2.55 1%	30.43 11	
		Full External Error ± 0.44 Analytical Error ± 0.02		1.94 1.5953	2σ Confidence Limit Error Magnification	
				76%	Spreading Factor	

