

EXP#23G09966 > 14A22-5 > STEELY (22-19)
NORTHEAST WASHINGTON > HUNTERS
23-OSU-01 (1B27-23) > Incremental Heating > BIOTITE > Dan Miggins

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

Project = **STEELY (22-19)**
Sample = **14A22-5**
Material = **BIOTITE**
Location = **Hunters**
Region = **Northeast Washington**
Analyst = **Dan Miggins**
Irradiation = **23-OSU-01 (1B27-23)**
Position = **X: 999 | Y: 999 | Z/H: 37.64267 mm**
FCT-NM Age = **28.201 ± 0.023 Ma**
FCT-NM Reference = **Kuiper et al (2008)**
FCT-NM 40Ar/39Ar Ratio = **9.60281 ± 0.00855**
FCT-NM J-value = **0.00161677 ± 0.00000144**
Air Shot 40Ar/36Ar = **307.5990 ± 0.4983**
Air Shot MDF = **0.99264409 ± 0.00046774 (LIN)**
Experiment Type = **Incremental Heating**
Extraction Method = **Bulk Laser Heating**
Heating = **50 sec**
Isolation = **3.00 min**
Instrument = **ARGUS-VI-G**
Preferred Age = **Plateau Age**
Age Classification = **Eruption 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(total) = **5.463 ± 0.107 E-10 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**
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**
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**
Trapped 40/36(a) = **298.56 ± 7.21**
Trapped 38/36(a) = **0.1885 ± 0.0003**
Standard MDF 40/36(a) = **298.56 ± 0.31**
Standard MDF Reference = **Lee et al 2006**

Results	40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD	39Ar(k) (%n)	K/Ca ± 2σ
Age Plateau		32.97374 ± 0.02213 ± 0.07%	95.07 ± 0.18 ± 0.19%	2.24	74.16	31.3 ± 4.0
Error Mean				0%	17	
				1.71	2σ Confidence Limit	
				1.4978	Error Magnification	
Total Fusion Age		32.91746 ± 0.01599 ± 0.05%	94.91 ± 0.17 ± 0.18%		41	34.6 ± 1.6
Normal Isochron	312.66 ± 15.21 ± 4.86%	32.94912 ± 0.03698 ± 0.11%	95.00 ± 0.19 ± 0.21%	2.47	74.16	
Error Chron				0%	17	
				1.73	2σ Confidence Limit	
				1.5726	Error Magnification	
Inverse Isochron	315.68 ± 15.24 ± 4.83%	32.94218 ± 0.03718 ± 0.11%	94.98 ± 0.20 ± 0.21%	2.50	74.16	
Error Chron				0%	17	
				1.73	2σ Confidence Limit	
				1.5796	Error Magnification	
				5%	Spreading Factor	

