

EXP#23G11120 > 3A22-7 > STEELY (22-19)
NORTHEAST WASHINGTON > HUNTERS
23-OSU-01 (1B23-23) > Incremental Heating > Biotite > Dan Miggins

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

Project = **STEELY (22-19)**
Sample = **3A22-7**
Material = **Biotite**
Location = **Hunters**
Region = **Northeast Washington**
Analyst = **Dan Miggins**
Irradiation = **23-OSU-01 (1B23-23)**
Position = **X: 999 | Y: 999 | Z/H: 31.83141 mm**
FCT-NM Age = **28.201 ± 0.023 Ma**
FCT-NM Reference = **Kuiper et al (2008)**
FCT-NM 40Ar/39Ar Ratio = **9.53592 ± 0.00896**
FCT-NM J-value = **0.00162811 ± 0.00000153**
Air Shot 40Ar/36Ar = **308.3090 ± 0.6012**
Air Shot MDF = **0.99208456 ± 0.00053572 (LIN)**
Experiment Type = **Incremental Heating**
Extraction Method = **Bulk Laser Heating**
Heating = **50 sec**
Isolation = **6.00 min**
Instrument = **ARGUS-VI-G**
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(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) = **243.11 ± 3.53**
Trapped 38/36(a) = **0.1885 ± 0.0003**
Standard MDF 40/36(a) = **298.56 ± 0.31**
Standard MDF Reference = **Lee et al 2006**

Sub-atmospheric 40/36 = 243.11 ± 1.45 (%SD).

Results	40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD	39Ar(k) (%n)	K/Ca ± 2σ
Age Plateau		17.57103 ± 0.01313 ± 0.07%	51.63 ± 0.10 ± 0.20%	1.28 22%	69.39 14	14.5 ± 2.3
		Full External Error ± 2.67	Analytical Error ± 0.04	1.78	2σ Confidence Limit	Error Magnification
				1.1308		
Total Fusion Age		17.60779 ± 0.02005 ± 0.11%	51.74 ± 0.11 ± 0.22%		42	12.2 ± 0.2
		Full External Error ± 2.67	Analytical Error ± 0.06			
Normal Isochron	240.98 ± 7.18 ± 2.98%	17.58207 ± 0.04089 ± 0.23%	51.66 ± 0.15 ± 0.29%	3.59 0%	69.39 14	
Error Chron		Full External Error ± 2.67	Analytical Error ± 0.12	1.82	2σ Confidence Limit	Error Magnification
				1.8950		
Inverse Isochron	243.11 ± 7.06 ± 2.90%	17.56969 ± 0.04025 ± 0.23%	51.63 ± 0.15 ± 0.29%	3.48 0%	69.39 14	
Error Chron		Full External Error ± 2.67	Analytical Error ± 0.12	1.82	2σ Confidence Limit	Error Magnification
				1.8653	8%	Spreading Factor

