EXP#23G11199 > 4A22-3 > STEELY (22-19)
NORTHEAST WASHINGTON > HUNTERS
23-OSU-01 (1B17-23) > Incremental Heating > Biotite > Dan Miggins

Information on Analysis and Constants Used in Calculations

Project = **STEELY (22-19)**
Sample = **4A22-3**
Material = **Biotite**
Location = **Hunters**
Region = **Northeast Washington**
Analyst = **Dan Miggins**
Irradiation = **23-OSU-01 (1B17-23)**
Position = **X: 999 | Y: 999 | Z/H: 22.44345 mm**
FCT-NM Age = **28.201 ± 0.023 Ma**
FCT-NM Reference = **Kuiper et al (2008)**
FCT-NM 40Ar/39Ar Ratio = **9.45124 ± 0.00851**
FCT-NM J-value = **0.00164269 ± 0.00000148**
Air Shot 40Ar/36Ar = **308.8250 ± 0.5065**
Air Shot MDF = **0.99167954 ± 0.00046996 (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) = **351.76 ± 5.01**
Trapped 38/36(a) = **0.1885 ± 0.0003**
Standard MDF 40/36(a) = **298.56 ± 0.31**
Standard MDF Reference = **Lee et al 2006**

Excess 40/36 = 351.76 ± 1.42 (%SD).

Results	40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD	39Ar(k) (%,n)	K/Ca ± 2σ
Age Plateau		17.56173 ± 0.01515	**52.06 ± 0.10**	3.64	76.63	12.5 ± 3.6
Error Mean		± 0.09%	**± 0.20%**	0%	16	
			Full External Error ± 2.69	1.73	2σ Confidence Limit	
			Analytical Error ± 0.04	1.9086	Error Magnification	
Total Fusion Age		17.45763 ± 0.01088	**51.76 ± 0.10**		42	8.9 ± 0.1
		± 0.06%	**± 0.19%**			
			Full External Error ± 2.67			
			Analytical Error ± 0.03			
Normal Isochron	**378.61 ± 15.02**	17.50853 ± 0.03671	**51.90 ± 0.14**	5.52	76.63	
Error Chron	**± 3.97%**	± 0.21%	**± 0.27%**	0%	16	
			Full External Error ± 2.68	1.76	2σ Confidence Limit	
			Analytical Error ± 0.11	2.3490	Error Magnification	
Inverse Isochron	**374.15 ± 14.79**	17.52073 ± 0.03617	**51.94 ± 0.14**	5.38	76.63	
Error Chron	**± 3.95%**	± 0.21%	**± 0.27%**	0%	16	
			Full External Error ± 2.68	1.76	2σ Confidence Limit	
			Analytical Error ± 0.11	2.3197	Error Magnification	
				5%	Spreading Factor