

EXP#22F05816 > AS23JUL21-2 > STEELY (21-32)
WESTERN CASCADES > NORTH BEND
22-OSU-01 (1B28-22) > Incremental Heating > Groundmass > Dan Miggins

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

Project = **STEELY (21-32)**
Sample = **AS23JUL21-2**
Material = **Groundmass**
Location = **North Bend**
Region = **Western Cascades**
Analyst = **Dan Miggins**
Irradiation = **22-OSU-01 (1B28-22)**
Position = **X: 999 | Y: 999 | Z/H: 51.1771 mm**
FCT-NM Age = **28.201 ± 0.023 Ma**
FCT-NM Reference = **Kuiper et al (2008)**
FCT-NM 40Ar/39Ar Ratio = **9.93120 ± 0.00943**
FCT-NM J-value = **0.00156330 ± 0.00000149**
Air Shot 40Ar/36Ar = **300.0800 ± 0.3511**
Air Shot MDF = **0.99873203 ± 0.00038987 (LIN)**
Experiment Type = **Incremental Heating**
Extraction Method = **Bulk Laser Heating**
Heating = **50 sec**
Isolation = **6.00 min**
Instrument = **ARGUS-VI-F**
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) = **295.99 ± 0.86**
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 = 295.99 ± 0.29 (%SD).

Results	40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD	39Ar(k) (%n)	K/Ca ± 2σ
Age Plateau		10.11444 ± 0.02205 ± 0.22%	28.72 ± 0.08 ± 0.29%	1.01 44%	53.31 13	0.99 ± 0.37
		Full External Error ± 1.49	Analytical Error ± 0.06	1.82 2σ Confidence Limit	1.0049 Error Magnification	
Total Fusion Age		10.11969 ± 0.02420 ± 0.24%	28.73 ± 0.09 ± 0.30%		28	0.83 ± 0.00
		Full External Error ± 1.49	Analytical Error ± 0.07			
Normal Isochron	292.82 ± 1.96 ± 0.67%	10.15472 ± 0.03365 ± 0.33%	28.83 ± 0.11 ± 0.38%	0.37 97%	53.31 13	
		Full External Error ± 1.50	Analytical Error ± 0.09	1.85 2σ Confidence Limit	1.0000 Error Magnification	
Inverse Isochron	292.88 ± 1.96 ± 0.67%	10.15389 ± 0.03363 ± 0.33%	28.83 ± 0.11 ± 0.38%	0.37 97%	53.31 13	
		Full External Error ± 1.50	Analytical Error ± 0.09	1.85 2σ Confidence Limit	1.0000 Error Magnification	48% Spreading Factor

