

EXP#22F06458 > AS20SEP21-7 > STEELY (21-32)
WESTERN CASCADES > NORTH BEND
22-OSU-01 (1B30-22) > Incremental Heating > Groundmass > Dan Miggins

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

Project = **STEELY (21-32)**
Sample = **AS20SEP21-7**
Material = **Groundmass**
Location = **North Bend**
Region = **Western Cascades**
Analyst = **Dan Miggins**
Irradiation = **22-OSU-01 (1B30-22)**
Position = **X: 999 | Y: 999 | Z/H: 55.12659 mm**
FCT-NM Age = **28.201 ± 0.023 Ma**
FCT-NM Reference = **Kuiper et al (2008)**
FCT-NM 40Ar/39Ar Ratio = **10.01943 ± 0.00942**
FCT-NM J-value = **0.00154954 ± 0.00000146**
Air Shot 40Ar/36Ar = **300.3280 ± 0.3874**
Air Shot MDF = **0.99852637 ± 0.00041235 (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 = **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) = **298.56 ± 0.31**
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		8.95897 ± 0.36123 ± 4.03%	25.24 ± 1.01 ± 4.01%	0.81 68% 1.69 1.0000	85.87 18	0.085 ± 0.010
			Full External Error ± 1.65 Analytical Error ± 1.01		2σ Confidence Limit Error Magnification	
Total Fusion Age		9.22450 ± 0.42100 ± 4.56%	25.98 ± 1.18 ± 4.54%		28	0.086 ± 0.001
			Full External Error ± 1.79 Analytical Error ± 1.18			
Normal Isochron	299.36 ± 2.77 ± 0.92%	8.85679 ± 0.47562 ± 5.37%	24.95 ± 1.33 ± 5.34%	0.84 65% 1.71 1.0000	85.87 18	
			Full External Error ± 1.86 Analytical Error ± 1.33		2σ Confidence Limit Error Magnification	
Inverse Isochron	299.42 ± 2.77 ± 0.93%	8.87751 ± 0.47408 ± 5.34%	25.01 ± 1.33 ± 5.31%	0.85 62% 1.71 1.0000	85.87 18	
			Full External Error ± 1.85 Analytical Error ± 1.33		2σ Confidence Limit Error Magnification Spreading Factor	

