

**EXP#20F11845 > AM 2244 > Muscovite > HOUCK (19-27)**  
**SOUTH PARK > AGATE MOUNTAIN QUAD**  
**20-OSU-01 (1D15-20) > Incremental Heating > Dan Miggins**

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

Project = **HOUCK (19-27)**  
Sample = **AM 2244**  
Material = **Muscovite**  
Location = **Agate Mountain Quad**  
Region = **South Park**  
Analyst = **Dan Miggins**  
Irradiation = **20-OSU-01 (1D15-20)**  
Position = **X: 0 | Y: 0 | Z/H: 14.23075 mm**  
FCT-NM Age = **28.201 ± 0.023 Ma**  
FCT-NM Reference = **Kuiper et al (2008)**  
FCT-NM 40Ar/39Ar Ratio = **9.41696 ± 0.01422**  
FCT-NM J-value = **0.00164867 ± 0.00000249**  
Air Shot 40Ar/36Ar = **298.6190 ± 0.3554**  
Air Shot MDF = **0.99995054 ± 0.00039554 (LIN)**  
Experiment Type = **Incremental Heating**  
Extraction Method = **Bulk Laser Heating**  
Heating = **60 sec**  
Isolation = **3.12 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 = **5.463 ± 0.107 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**  
Decay 40K(EC,β<sup>+</sup>) = **0.580 ± 0.014 E-10 1/a**  
Decay 40K(β<sup>-</sup>) = **4.884 ± 0.099 E-10 1/a**  
Atmospheric 40/36(a) = **434.41 ± 78.38**  
Atmospheric 38/36(a) = **0.1885 ± 0.0003**  
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**

Excess Initial 40Ar/36Ar = 434.41 ± 18.04 (%SD).

Results	40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ga)	MSWD	39Ar(k) (% ,n)	K/Ca ± 2σ
Age Plateau <b>Error Mean</b>		681.60875 ± 0.34801 ± 0.05%	<b>1.379 ± 0.003</b> ± 0.22%	2.70	70.24 23	177 ± 46
			Full External Error ± 0.062 Analytical Error ± 0.000	0% 1.60 1.6435	2σ Confidence Limit Error Magnification	
Total Fusion Age		681.67147 ± 0.20266 ± 0.03%	<b>1.379 ± 0.003</b> ± 0.21%		38	229 ± 49
			Full External Error ± 0.062 Analytical Error ± 0.000			
Normal Isochron	<b>463.21 ± 278.56</b> ± 60.14%	681.57061 ± 0.61571 ± 0.09%	<b>1.379 ± 0.003</b> ± 0.22%	3.35	70.24 23	
			Full External Error ± 0.062 Analytical Error ± 0.001	0% 1.62 1.8311	2σ Confidence Limit Error Magnification	
Inverse Isochron	<b>434.41 ± 156.76</b> ± 36.09%	681.65414 ± 0.61482 ± 0.09%	<b>1.379 ± 0.003</b> ± 0.22%	3.35	70.24 23	
			Full External Error ± 0.062 Analytical Error ± 0.001	0% 1.62 1.8294 1%	2σ Confidence Limit Error Magnification Spreading Factor	

