

EXP#20G13352 > JT44 > Groundmass > HOUCK (19-27)
SOUTH PARK > AGATE MOUNTAIN QUAD
20-OSU-01 (1F51-20) > Incremental Heating > Daniel Heaton

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

Project = **HOUCK (19-27)**
Sample = **JT44**
Material = **Groundmass**
Location = **Agate Mountain Quad**
Region = **South Park**
Analyst = **Daniel Heaton**
Irradiation = **20-OSU-01 (1F51-20)**
Position = X: 0 | Y: 0 | Z/H: 66.42144 mm
FCT-NM Age = **28.201 ± 0.023 Ma**
FCT-NM Reference = **Kuiper et al (2008)**
FCT-NM 40Ar/39Ar Ratio = **10.05477 ± 0.01116**
FCT-NM J-value = **0.00154409 ± 0.00000171**
Air Shot 40Ar/36Ar = **298.0660 ± 0.3159**
Air Shot MDF = **1.00041487 ± 0.00037234 (LIN)**
Experiment Type = **Incremental Heating**
Extraction Method = **Bulk Laser Heating**
Heating = **60 sec**
Isolation = **6.12 min**
Instrument = **ARGUS-VI-G**
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 = **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⁺) = **0.580 ± 0.014 E-10 1/a**
Decay 40K(β⁻) = **4.884 ± 0.099 E-10 1/a**
Atmospheric 40/36(a) = **215.26 ± 43.30**
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**

Subatmospheric Initial 40Ar/36Ar = 215.26 ± 20.11 (%SD).

Results	40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD	39Ar(k) (%n)	K/Ca ± 2σ
Age Plateau		12.48420 ± 0.01482 ± 0.12%	34.95 ± 0.09 ± 0.25%	1.56 12%	54.21 10	0.825 ± 0.062
			Full External Error ± 1.81 Analytical Error ± 0.04	1.94 1.2501	2σ Confidence Limit Error Magnification	
Total Fusion Age		12.52101 ± 0.01703 ± 0.14%	35.05 ± 0.09 ± 0.26%		32	0.549 ± 0.001
			Full External Error ± 1.82 Analytical Error ± 0.05			
Normal Isochron	237.09 ± 159.56 ± 67.30%	12.47288 ± 0.07449 ± 0.60%	34.92 ± 0.22 ± 0.63%	32.22 0%	54.21 10	
			Full External Error ± 1.82 Analytical Error ± 0.21	2.00 5.6763	2σ Confidence Limit Error Magnification	
Inverse Isochron Error Chron	212.17 ± 115.59 ± 54.48%	12.48752 ± 0.07535 ± 0.60%	34.96 ± 0.22 ± 0.64%	32.92 0%	54.21 10	
			Full External Error ± 1.82 Analytical Error ± 0.21	2.00 5.7375	2σ Confidence Limit Error Magnification	
				1%	Spreading Factor	

