

EXP#21F25573 > KH245 > biotite > HOUCK (21-28)
CENT. CO VOLCANIC FIELD > SPINNEY MOUNTAIN QUAD
21-OSU-05 (5D10-21) > Total Fusion > Dan Miggins

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

Project = **HOUCK (21-28)**
Sample = **KH245**
Material = **biotite**
Location = **Spinney Mountain Quad**
Region = **Cent. CO Volcanic Field**
Analyst = **Dan Miggins**
Irradiation = **21-OSU-05 (5D10-21)**
Position = **X: 999 | Y: 999 | Z/H: 12.65559 mm**
FCT-NM Age = **28.201 ± 0.023 Ma**
FCT-NM Reference = **Kuiper et al (2008)**
FCT-NM 40Ar/39Ar Ratio = **9.45039 ± 0.00973**
FCT-NM J-value = **0.00164284 ± 0.00000169**
Air Shot 40Ar/36Ar = **299.9950 ± 0.3150**
Air Shot MDF = **0.99880260 ± 0.00036818 (LIN)**
Experiment Type = **Total Fusion**
Extraction Method = **Single Crystal Laser Heating**
Heating = **50 sec**
Isolation = **1.50 min**
Instrument = **ARGUS-VI-F**
Preferred Age = **Ideogram 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) = **298.56 ± 0.31**
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**

Results	40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD	39Ar(k) (%),n	K/Ca ± 2σ
Age Plateau		11.65979 ± 0.01566	34.73 ± 0.08	9.86	100.00	37.2 ± 18.7
Error Mean		± 0.13%	± 0.24%	0%	30	
			Full External Error ± 1.80	1.53	2σ Confidence Limit	
			Analytical Error ± 0.05	3.1397	Error Magnification	
Total Fusion Age		11.66151 ± 0.00541	34.74 ± 0.07		30	18.8 ± 0.3
		± 0.05%	± 0.21%			
			Full External Error ± 1.80			
			Analytical Error ± 0.02			
Normal Isochron	308.19 ± 5.73	11.62192 ± 0.02642	34.62 ± 0.11	6.83	100.00	
	± 1.86%	± 0.23%	± 0.30%	0%	30	
			Full External Error ± 1.79	1.53	2σ Confidence Limit	
			Analytical Error ± 0.08	2.6132	Error Magnification	
Inverse Isochron	309.89 ± 5.56	11.61468 ± 0.02562	34.60 ± 0.10	6.39	100.00	
	± 1.79%	± 0.22%	± 0.30%	0%	30	
			Full External Error ± 1.79	1.53	2σ Confidence Limit	
			Analytical Error ± 0.08	2.5287	Error Magnification	
				29%	Spreading Factor	

