

EXP#20F11903 > AM 2153 > Muscovite > HOUCK (19-27)
SOUTH PARK > AGATE MOUNTAIN QUAD
20-OSU-01 (1D19-20) > Incremental Heating > Dan Miggins

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

Project = **HOUCK (19-27)**
Sample = **AM 2153**
Material = **Muscovite**
Location = **Agate Mountain Quad**
Region = **South Park**
Analyst = **Dan Miggins**
Irradiation = **20-OSU-01 (1D19-20)**
Position = **X: 0 | Y: 0 | Z/H: 17.30233 mm**
FCT-NM Age = **28.201 ± 0.023 Ma**
FCT-NM Reference = **Kuiper et al (2008)**
FCT-NM 40Ar/39Ar Ratio = **9.43279 ± 0.01424**
FCT-NM J-value = **0.00164591 ± 0.00000249**
Air Shot 40Ar/36Ar = **298.4400 ± 0.3820**
Air Shot MDF = **1.00010065 ± 0.00041301 (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⁺) = **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 (Ga) | MSWD | 39Ar(k) (%),n | K/Ca ± 2σ |
|------------------|------------------|---------------------|-----------------------------|--------|---------------------|-----------|
| Age Plateau | | 683.97548 ± 0.34045 | 1.380 ± 0.003 | 2.72 | 53.66 | 382 ± 167 |
| Error Mean | | ± 0.05% | ± 0.21% | 0% | 14 | |
| | | | Full External Error ± 0.062 | 1.78 | 2σ Confidence Limit | |
| | | | Analytical Error ± 0.000 | 1.6478 | Error Magnification | |
| Total Fusion Age | | 684.46231 ± 0.16402 | 1.381 ± 0.003 | | 46 | 364 ± 115 |
| | | ± 0.02% | ± 0.21% | | | |
| | | | Full External Error ± 0.062 | | | |
| | | | Analytical Error ± 0.000 | | | |
| Normal Isochron | 248.68 ± 375.46 | 684.13657 ± 0.81134 | 1.381 ± 0.003 | 3.02 | 53.66 | |
| | ##### | ± 0.12% | ± 0.23% | 0% | 14 | |
| | | | Full External Error ± 0.062 | 1.82 | 2σ Confidence Limit | |
| | | | Analytical Error ± 0.001 | 1.7379 | Error Magnification | |
| Inverse Isochron | 385.76 ± 190.56 | 683.80834 ± 0.79144 | 1.380 ± 0.003 | 2.88 | 53.66 | |
| | ± 49.40% | ± 0.12% | ± 0.23% | 0% | 14 | |
| | | | Full External Error ± 0.062 | 1.82 | 2σ Confidence Limit | |
| | | | Analytical Error ± 0.001 | 1.6981 | Error Magnification | |
| | | | | 0% | Spreading Factor | |

