

EXP#20F28379 > 22 DRBLJ 19 > Groundmass > MCCLAUGHRY (19-20)
EASTERN CASCADES > BADGER LAKE
20-OSU-04 (4B2-20) > Incremental Heating > Dan Miggins

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

Project = MCCLAUGHRY (19-20)
Sample = 22 DRBLJ 19
Material = Groundmass
Location = Badger Lake
Region = Eastern Cascades
Analyst = Dan Miggins
Irradiation = 20-OSU-04 (4B2-20)
Position = X: 0 | Y: 0 | Z/H: 1.506825 mm
FCT-NM Age = 28.201 ± 0.023 Ma
FCT-NM Reference = Kuiper et al (2008)
FCT-NM 40Ar/39Ar Ratio = 9.34781 ± 0.00570
FCT-NM J-value = 0.00166087 ± 0.00000101
Air Shot 40Ar/36Ar = 296.9340 ± 0.3474
Air Shot MDF = 1.00137076 ± 0.00039400 (LIN)
Experiment Type = Incremental Heating
Extraction Method = Bulk Laser Heating
Heating = 64 sec
Isolation = 6.12 min
Instrument = ARGUS-VI-F
Preferred Age = Mini Plateau
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) = 378.99 ± 37.81
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 = 378.99 ± 9.98 (%SD).

| Results | 40(a)/36(a) ± 2σ | 40(r)/39(k) ± 2σ | Age ± 2σ (Ma) | MSWD | 39Ar(k) (%n) | K/Ca ± 2σ |
|------------------|------------------|----------------------------|---------------|--------|---------------------|-------------|
| Age Plateau | | 1.24150 ± 0.00722 | 3.77 ± 0.02 | 1.84 | 58.38 | 2.11 ± 0.15 |
| Error Mean | | ± 0.58% | ± 0.59% | 3% | 15 | |
| | | Full External Error ± 0.20 | | 1.76 | 2σ Confidence Limit | |
| | | Analytical Error ± 0.02 | | 1.3582 | Error Magnification | |
| Total Fusion Age | | 1.19739 ± 0.01719 | 3.64 ± 0.05 | | 31 | 2.31 ± 0.00 |
| | | ± 1.44% | ± 1.44% | | | |
| | | Full External Error ± 0.20 | | | | |
| | | Analytical Error ± 0.05 | | | | |
| Normal Isochron | 272.27 ± 96.87 | 1.26161 ± 0.01956 | 3.83 ± 0.06 | 7.19 | 58.38 | |
| Error Chron | ± 35.58% | ± 1.55% | ± 1.55% | 0% | 15 | |
| | | Full External Error ± 0.21 | | 1.78 | 2σ Confidence Limit | |
| | | Analytical Error ± 0.06 | | 2.6810 | Error Magnification | |
| Inverse Isochron | 274.54 ± 99.26 | 1.26405 ± 0.01959 | 3.84 ± 0.06 | 8.15 | 58.38 | |
| Error Chron | ± 36.15% | ± 1.55% | ± 1.55% | 0% | 15 | |
| | | Full External Error ± 0.21 | | 1.78 | 2σ Confidence Limit | |
| | | Analytical Error ± 0.06 | | 2.8554 | Error Magnification | |
| | | | | 12% | Spreading Factor | |

