

EXP#18E08451 > IR27 > K-Feldspar > ETZEL (17-34)
CARPATHIANS > HIGH TATRAS
17-OSU-09 (9E7-17) > Incremental Heating > Tim OBrien

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

Project = ETZEL (17-34)
Sample = IR27
Material = K-Feldspar
Location = High Tatras
Region = Carpathians
Analyst = Tim OBrien
Irradiation = 17-OSU-09 (9E7-17)
Position = X: 0 | Y: 0 | Z/H: 10.72089 mm
FCT-NM Age = 28.201 ± 0.023 Ma
FCT-NM Reference = Kuiper et al (2008)
FCT-NM 40Ar/39Ar Ratio = 9.66132 ± 0.00638
FCT-NM J-value = 0.00162684 ± 0.00000107
Air Shot 40Ar/36Ar = 307.0920 ± 0.2795
Air Shot MDF = 0.99055089 ± 0.00061151 (LIN)
Experiment Type = Incremental Heating
Extraction Method = Bulk Laser Heating
Heating = 55 sec
Isolation = 3.00 min
Instrument = ARGUS-VI-E
Preferred Age = Plateau Age
Age Classification = Cooling 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 = 5.530 ± 0.048 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 ± 0.009 E-10 1/a
Decay 40K(β⁻) = 4.950 ± 0.043 E-10 1/a
Atmospheric 40/36(a) = 295.50
Atmospheric 38/36(a) = 0.1869
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

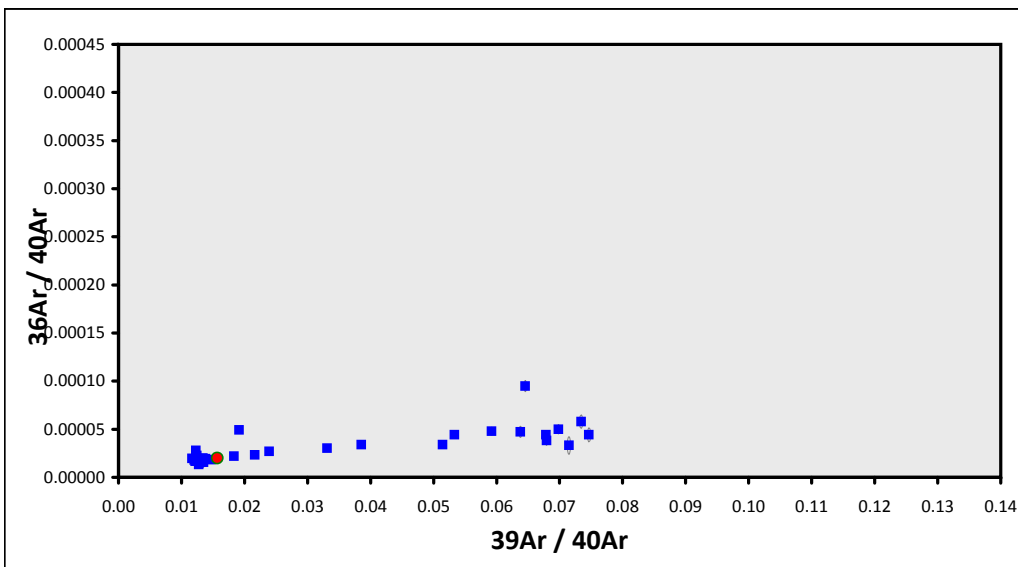
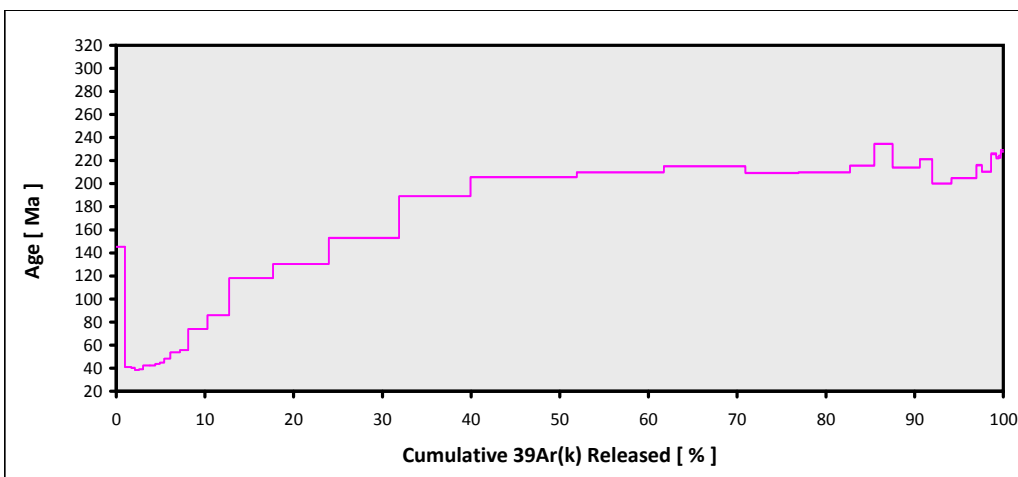
Results	40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD	39Ar(k) (%,n)	K/Ca ± 2σ
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Age Plateau
Cannot Calculate

Total Fusion Age 63.35149 ± 0.02082 ± 0.03% 177.38 ± 0.23 ± 0.13%
Full External Error ± 3.92
Analytical Error ± 0.06

Normal Isochron
Cannot Calculate

Inverse Isochron
Cannot Calculate



EXP#18E08515 > IR35 > K-Feldspar > ETZEL (17-34)
CARPATHIANS > HIGH TATRAS
17-OSU-09 (9E15-17) > Incremental Heating > Tim OBrien

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

Project = **ETZEL (17-34)**
Sample = **IR35**
Material = **K-Feldspar**
Location = **High Tatras**
Region = **Carpathians**
Analyst = **Tim OBrien**
Irradiation = **17-OSU-09 (9E15-17)**
Position = **X: 0 | Y: 0 | Z/H: 20.26842 mm**
FCT-NM Age = **28.201 ± 0.023 Ma**
FCT-NM Reference = **Kuiper et al (2008)**
FCT-NM 40Ar/39Ar Ratio = **9.68901 ± 0.00639**
FCT-NM J-value = **0.00162219 ± 0.00000107**
Air Shot 40Ar/36Ar = **312.7310 ± 1.1196**
Air Shot MDF = **0.98620758 ± 0.00101552 (LIN)**
Experiment Type = **Incremental Heating**
Extraction Method = **Bulk Laser Heating**
Heating = **55 sec**
Isolation = **3.00 min**
Instrument = **ARGUS-VI-E**
Preferred Age = **Total Fusion**
Age Classification = **Cooling 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 = **5.530 ± 0.048 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 ± 0.009 E-10 1/a**
Decay 40K(β⁻) = **4.950 ± 0.043 E-10 1/a**
Atmospheric 40/36(a) = **295.50**
Atmospheric 38/36(a) = **0.1869**
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**

Minimum age ~35-40 Ma and Maximum age ~140 Ma

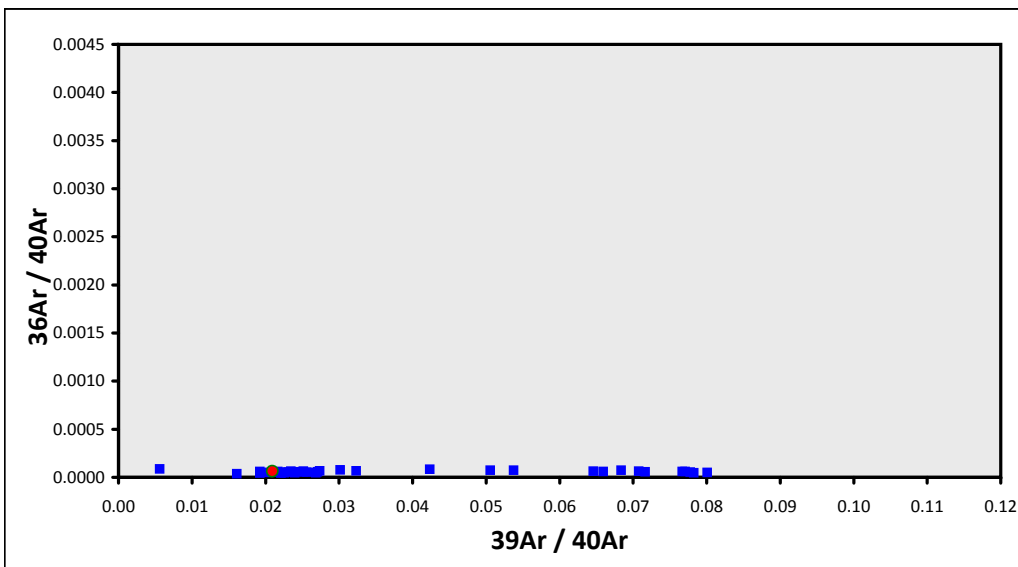
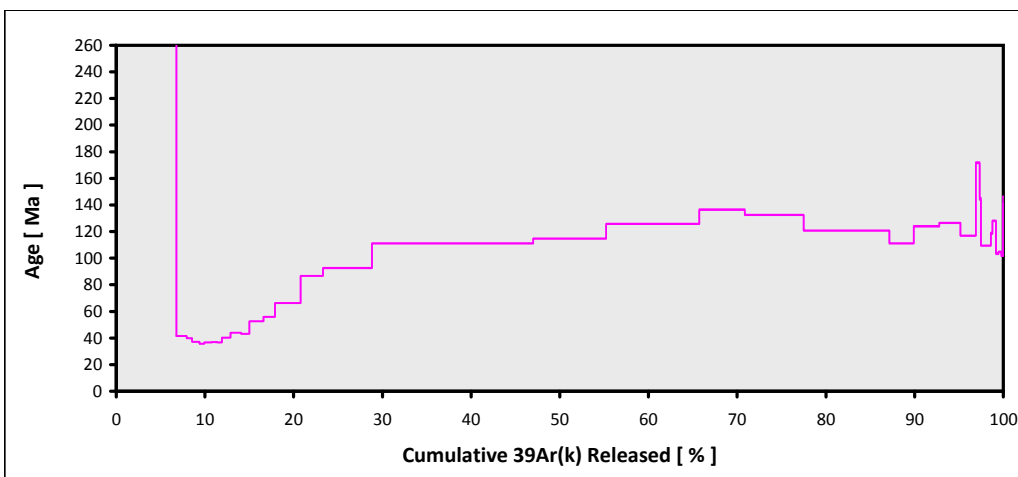
Results	40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD	39Ar(k) (%,n)	K/Ca ± 2σ
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Age Plateau
Cannot Calculate

Total Fusion Age 46.87297 ± 0.02791 ± 0.06% **132.52 ± 0.19 ± 0.14%** 35 102 ± 23
Full External Error ± 2.94
Analytical Error ± 0.08

Normal Isochron
Cannot Calculate

Inverse Isochron
Cannot Calculate



EXP#18E08708 > IR39 > K-Feldspar > ETZEL (17-34)
CARPATHIANS > HIGH TATRAS
17-OSU-09 (9E10-17) > Incremental Heating > Tim OBrien

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

Project = **ETZEL (17-34)**
Sample = **IR39**
Material = **K-Feldspar**
Location = **High Tatras**
Region = **Carpathians**
Analyst = **Tim OBrien**
Irradiation = **17-OSU-09 (9E10-17)**
Position = **X: 0 | Y: 0 | Z/H: 14.4381 mm**
FCT-NM Age = **28.201 ± 0.023 Ma**
FCT-NM Reference = **Kuiper et al (2008)**
FCT-NM 40Ar/39Ar Ratio = **9.66731 ± 0.00638**
FCT-NM J-value = **0.00162583 ± 0.00000107**
Air Shot 40Ar/36Ar = **306.8720 ± 0.2885**
Air Shot MDF = **0.99072358 ± 0.00061457 (LIN)**
Experiment Type = **Incremental Heating**
Extraction Method = **Bulk Laser Heating**
Heating = **55 sec**
Isolation = **3.00 min**
Instrument = **ARGUS-VI-E**
Preferred Age = **Total Fusion**
Age Classification = **Cooling 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 = **5.530 ± 0.048 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 ± 0.009 E-10 1/a**
Decay 40K(β⁻) = **4.950 ± 0.043 E-10 1/a**
Atmospheric 40/36(a) = **295.50 ± 0.70**
Atmospheric 38/36(a) = **0.1869**
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**

maximum age ~220 Ma and minimum age ~50 Ma.
Cenozoic thermal event

Results	40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD	39Ar(k) (%,n)	K/Ca ± 2σ
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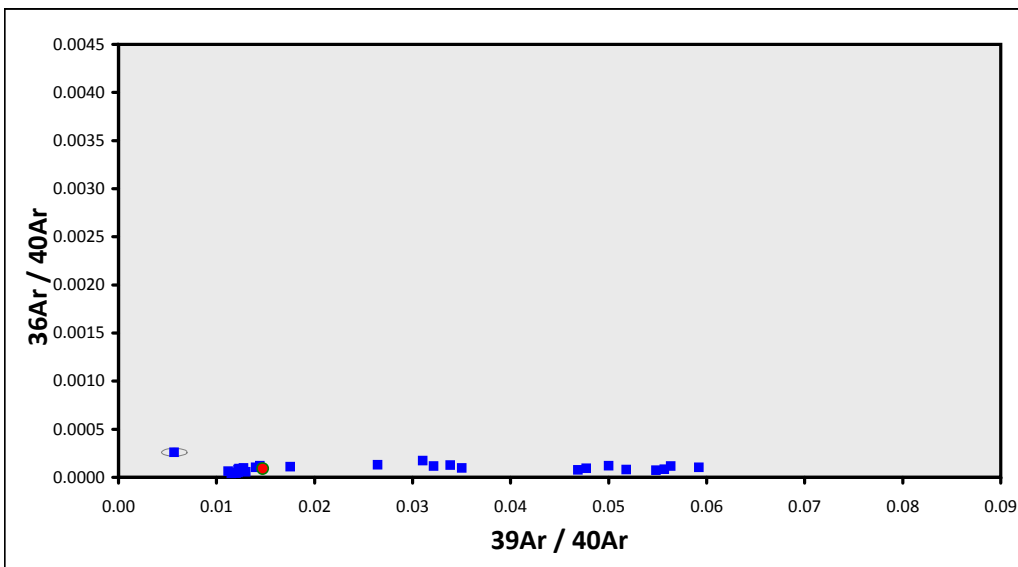
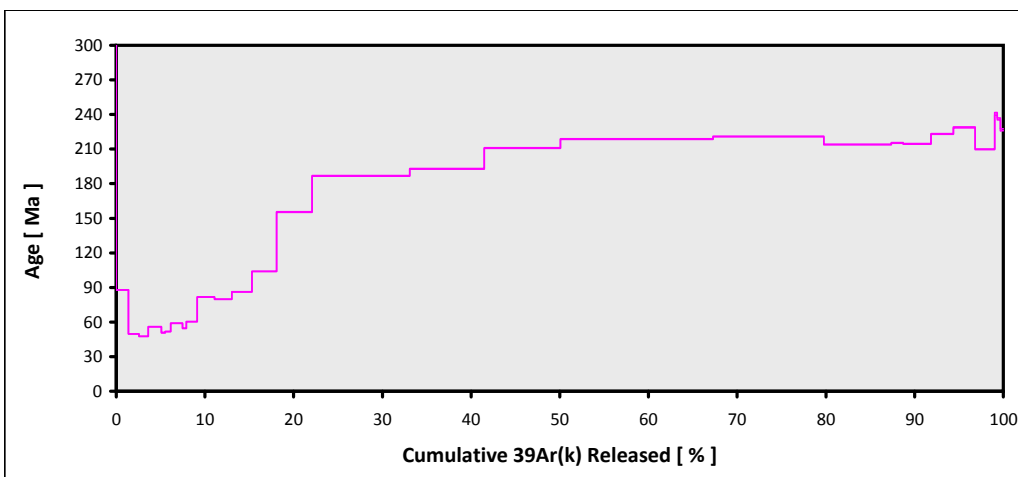
Age Plateau
Cannot Calculate

Total Fusion Age	66.09402 ± 0.02543 ± 0.04%	184.57 ± 0.24 ± 0.13%	29	30.6 ± 2.4
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Full External Error ± 4.07
Analytical Error ± 0.07

Normal Isochron
Cannot Calculate

Inverse Isochron
Cannot Calculate



EXP#18E08764 > IR41 > K-Feldspar > ETZEL (17-34)
CARPATHIANS > HIGH TATRAS
17-OSU-09 (9E9-17) > Incremental Heating > Tim OBrien

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

Project = **ETZEL (17-34)**
Sample = **IR41**
Material = **K-Feldspar**
Location = **High Tatras**
Region = **Carpathians**
Analyst = **Tim OBrien**
Irradiation = **17-OSU-09 (9E9-17)**
Position = **X: 0 | Y: 0 | Z/H: 13.04571 mm**
FCT-NM Age = **28.201 ± 0.023 Ma**
FCT-NM Reference = **Kuiper et al (2008)**
FCT-NM 40Ar/39Ar Ratio = **9.66436 ± 0.00638**
FCT-NM J-value = **0.00162633 ± 0.00000107**
Air Shot 40Ar/36Ar = **307.0870 ± 0.2825**
Air Shot MDF = **0.99055481 ± 0.00061238 (LIN)**
Experiment Type = **Incremental Heating**
Extraction Method = **Bulk Laser Heating**
Heating = **55 sec**
Isolation = **3.00 min**
Instrument = **ARGUS-VI-E**
Preferred Age = **Total Fusion**
Age Classification = **Cooling 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 = **5.530 ± 0.048 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 ± 0.009 E-10 1/a**
Decay 40K(β⁻) = **4.950 ± 0.043 E-10 1/a**
Atmospheric 40/36(a) = **295.50**
Atmospheric 38/36(a) = **0.1869**
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**

Maximum age ~150 Ma and minimum age ~40 Ma.
Cenozoic thermal event

Results	40(a)/36(a) ± 2σ	40(r)/39(k) ± 2σ	Age ± 2σ (Ma)	MSWD	39Ar(k) (%,n)	K/Ca ± 2σ
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Age Plateau
Cannot Calculate

Total Fusion Age	39.08675 ± 0.01340 ± 0.03%	111.44 ± 0.15 ± 0.13%	36	45.6 ± 4.8
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Full External Error ± 2.48
Analytical Error ± 0.04

Normal Isochron
Cannot Calculate

Inverse Isochron
Cannot Calculate

