

NEW PARAMETERS - ZETA METHOD

EFFECTIVE TRACK DENSITY FOR FLUENCE MONITOR (tracks/cm²): 1.19E+06

RELATIVE ERROR (%): 1.68

EFFECTIVE URANIUM CONTENT OF MONITOR (ppm): 11.00

ZETA FACTOR AND STANDARD ERROR (yr cm²): 348.18 6.52

SIZE OF COUNTER SQUARE (cm²): 6.01E-07

GRAIN AGES IN ORIGINAL ORDER

Grain no.	RhoS (cm ⁻²)	(Ns)	Rhol (cm ⁻²)	(Ni)	Squares	U+/-2s	Grain Age (Ma)
					Age	--95% CI--	
1	4.16E+05	(4)	4.16E+05	(4)	16	4 4 203.1	38.3 1022.6
2	2.78E+05	(2)	2.78E+05	(2)	12	3 3 203.1	14.9 2358.1
3	5.55E+05	(4)	5.55E+05	(4)	12	5 5 203.1	38.3 1022.6
4	1.67E+05	(3)	3.33E+05	(6)	30	3 2 104.9	16.7 466.0
5	2.78E+05	(2)	2.78E+05	(2)	12	3 3 203.1	14.9 2358.1
6	4.76E+05	(4)	3.57E+05	(3)	14	3 4 266.1	46.4 1648.6
7	2.78E+05	(2)	2.78E+05	(2)	12	3 3 203.1	14.9 2358.1
8	2.78E+05	(3)	1.85E+05	(2)	18	2 2 295.4	35.3 2928.1
9	3.33E+05	(6)	3.33E+05	(6)	30	3 2 203.1	54.9 729.3
10	1.04E+05	(1)	2.08E+05	(2)	16	2 2 108.9	1.7 1728.3
11	4.16E+05	(3)	6.94E+05	(5)	12	6 5 125.1	19.2 607.1

POOLED 3.08E+05(34) 3.44E+05(38) 184 3 1 182.1 111.6 294.7

CHI^2 PROBABILITY (%): 99.7

>>> Beware: possible upward bias in Chi^2 probability due to low counts <<<

POOLED AGE W/ 68% CONF. INTERVAL(Ma): 182.1, 140.4 -- 235.7 (-41.7 +53.6)

95% CONF. INTERVAL(Ma): 111.6 -- 294.7 (-70.5 +112.6)

CENTRAL AGE W/ 68% CONF. INTERVAL(Ma): 182.0, 144.0 -- 229.9 (-38.0 +47.9)

95% CONF. INTERVAL(Ma): 114.9 -- 287.4 (-67.1 +105.5)

AGE DISPERSION (%): 0.1

FIT OPTION: Best-fit peaks using the binomial model of Galbraith and Green

INITIAL GUESS FOR MODEL PARAMETERS (number of peaks to fit = 2)

Peak #.	Peak Age	Theta	Fraction(%)	Count
1.	203.30	0.500	27.8	3.06
2.	110.10	0.350	16.2	1.78

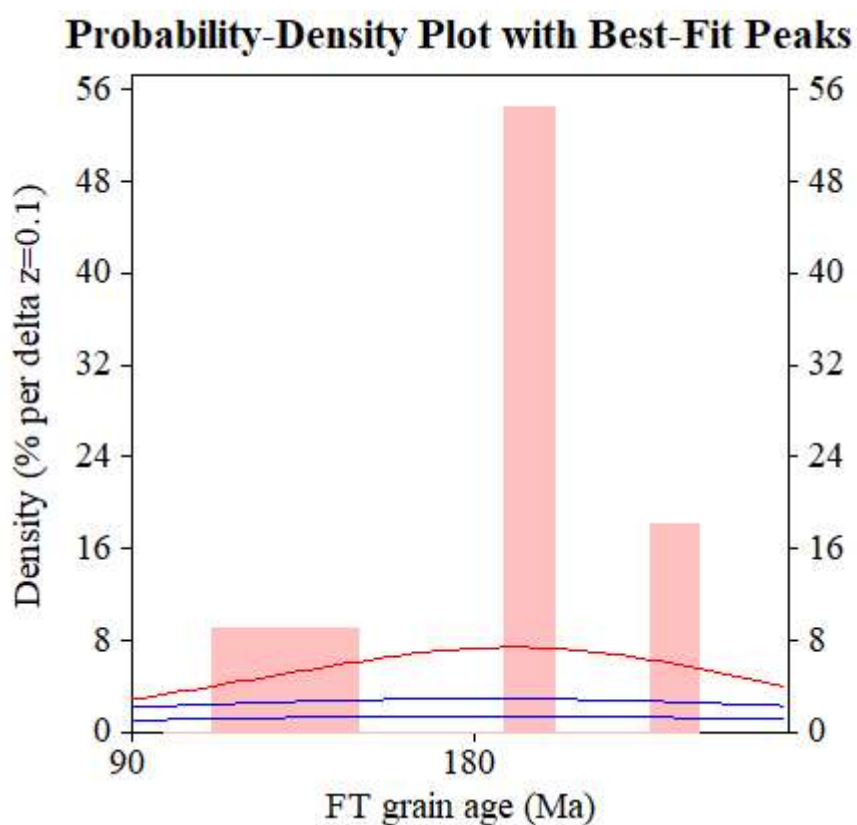
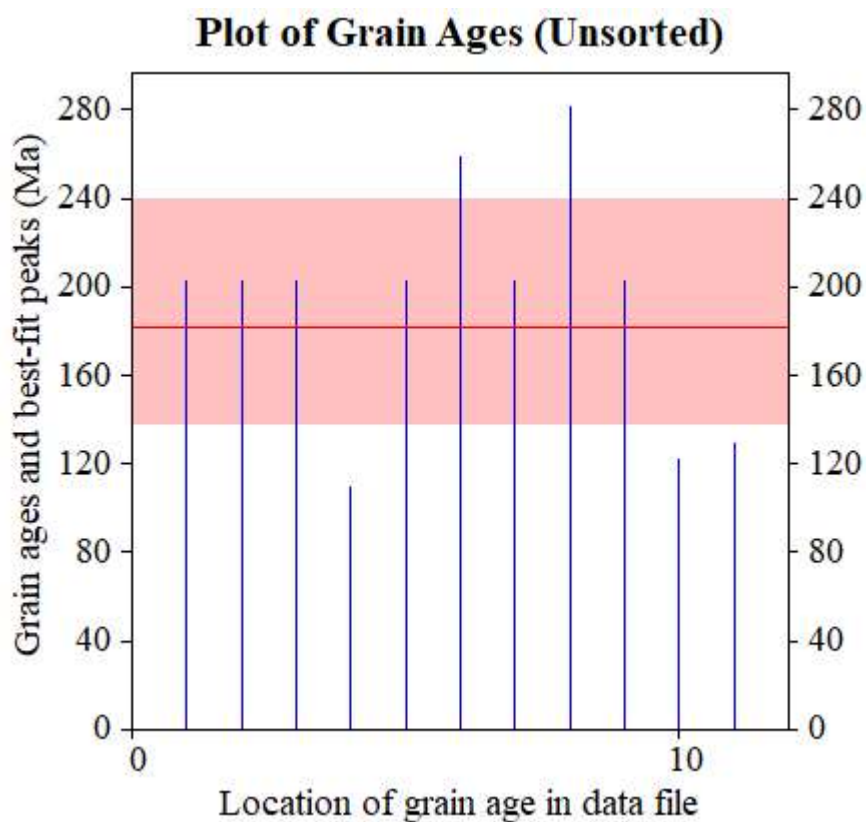
Total range for grain ages: 110.1 to 282.5 Ma
 Number of active grains (Num. used for fit): 11
 Number of removed grains: 0
 Degrees of freedom for fit: 8
 Average of the SE(Z)'s for the grains: 0.78
 Estimated width of peaks in PD plot in Z units: 0.91

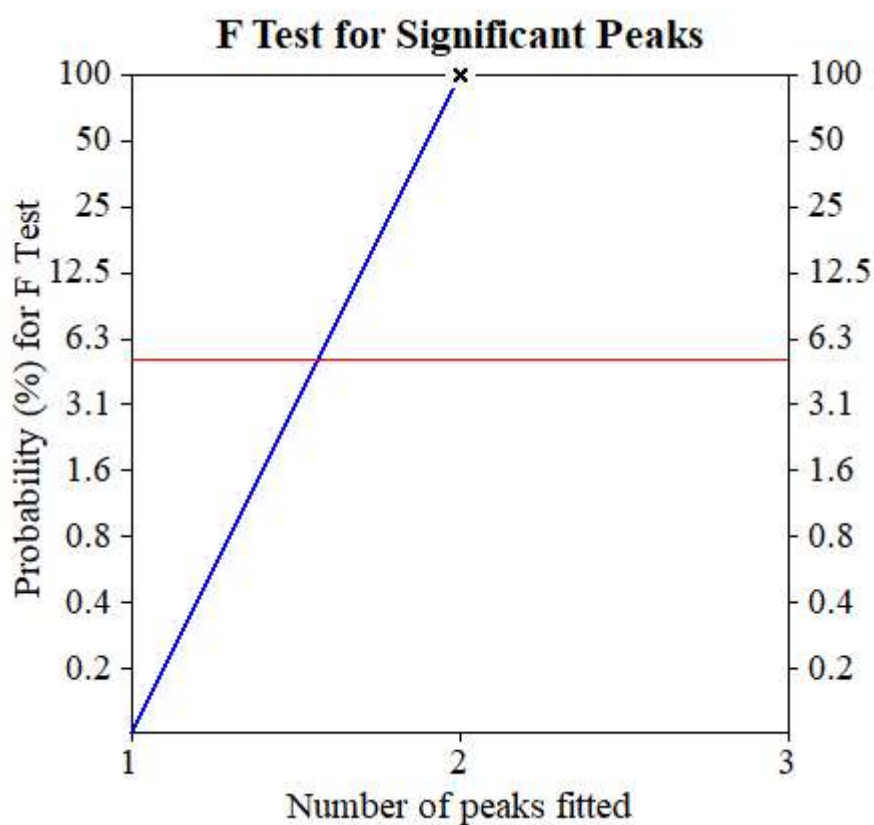
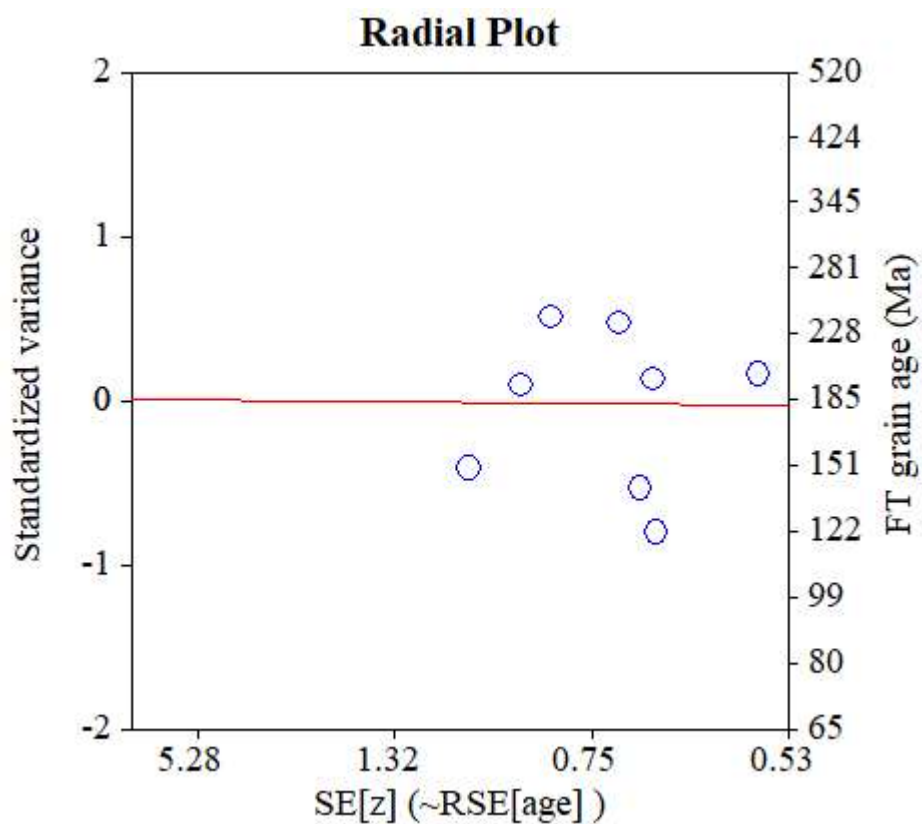
PARAMETERS FOR BEST-FIT PEAKS

- * Standard error for peak age includes group error
- * Peak width is for PD plot assuming a kernel factor = 0.60

#.	Peak Age(Ma)	68%CI	95%CI	W(Z)	Frac(%)	SE,%	Count
1.	182.0	-44.1 ...+58.0	-76.5 ...+130.6	0.91	67.3	3341682.0	7.4
2.	182.0	-17.2 ...+19.0	-32.2 ...+39.0	0.91	32.7	3341682.0	3.6

Log-likelihood for best fit: -13.682
 Chi-squared value for best fit: 1.960
 Reduced chi-squared value: 0.245
 Probability for F test: 100%
 Condition number for COVAR matrix: 12729040000.00
 Number of iterations: 7





Datafile: D:\GL_2.ftz

Title: GL2, trachybasalt;CN-5 glass for monitor

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EFFECTIVE TRACK DENSITY FOR FLUENCE MONITOR (tracks/cm²): 1.20E+06

RELATIVE ERROR (%): 1.68

EFFECTIVE URANIUM CONTENT OF MONITOR (ppm): 11.00

ZETA FACTOR AND STANDARD ERROR (yr cm²): 348.18 6.52

SIZE OF COUNTER SQUARE (cm²): 6.01E-07

GRAIN AGES IN ORIGINAL ORDER

Grain no.	RhoS (cm ⁻²)	(Ns)	Rhol (cm ⁻²)	(Ni)	Squares	U+/-2s	Grain Age (Ma)
					Age	--95% CI--	
1	4.16E+05	(3)	5.55E+05	(4)	12	5 5 156.2	22.8 863.1
2	3.33E+05	(3)	4.44E+05	(4)	15	4 4 156.2	22.8 863.1
3	2.50E+05	(3)	2.50E+05	(3)	20	2 2 204.9	27.8 1393.2
4	3.33E+05	(3)	3.33E+05	(3)	15	3 3 204.9	27.8 1393.2
5	1.59E+05	(2)	2.38E+05	(3)	21	2 2 140.6	11.6 1110.8
6	1.67E+05	(3)	1.67E+05	(3)	30	2 2 204.9	27.8 1393.2
7	1.39E+05	(1)	1.39E+05	(1)	12	1 2 204.9	2.7 8141.8
8	4.16E+05	(3)	4.16E+05	(3)	12	4 4 204.9	27.8 1393.2
9	2.08E+05	(2)	4.16E+05	(4)	16	4 4 107.0	9.4 688.7
10	2.38E+05	(3)	3.17E+05	(4)	21	3 3 156.2	22.8 863.1
11	1.11E+05	(1)	3.33E+05	(3)	15	3 3 75.2	1.3 811.5
12	2.22E+05	(2)	3.33E+05	(3)	15	3 3 140.6	11.6 1110.8
13	3.33E+05	(3)	3.33E+05	(3)	15	3 3 204.9	27.8 1393.2
14	1.39E+05	(1)	1.39E+05	(1)	12	1 2 204.9	2.7 8141.8
15	5.95E+05	(5)	3.57E+05	(3)	14	3 4 331.5	67.1 1919.3
16	9.25E+04	(1)	2.78E+05	(3)	18	3 3 75.2	1.3 811.5
17	3.12E+05	(3)	3.12E+05	(3)	16	3 3 204.9	27.8 1393.2
18	3.33E+05	(3)	4.44E+05	(4)	15	4 4 156.2	22.8 863.1
19	2.78E+05	(2)	2.78E+05	(2)	12	3 3 204.9	15.1 2376.4

POOLED 2.56E+05(47) 3.10E+05(57) 306 3 1 169.6 113.0 252.5

CHI^2 PROBABILITY (%):100.0

>>> Beware: possible upward bias in Chi^2 probability due to low counts <<<

POOLED AGE W/ 68% CONF. INTERVAL(Ma): 169.6, 136.9 -- 209.6 (-32.7 +40.0)

95% CONF. INTERVAL(Ma): 113.0 -- 252.5 (-56.6 +83.0)

CENTRAL AGE W/ 68% CONF. INTERVAL(Ma): 169.4, 139.2 -- 206.1 (-30.2 +36.6)

95% CONF. INTERVAL(Ma): 115.3 -- 248.5 (-54.2 +79.1)

AGE DISPERSION (%): 0.0

FIT OPTION: Best-fit peaks using the binomial model of Galbraith and Green

INITIAL GUESS FOR MODEL PARAMETERS (number of peaks to fit = 2)

Peak #.	Peak Age	Theta	Fraction(%)	Count
1.	176.80	0.463	26.7	5.08
2.	110.10	0.348	18.2	3.45

Total range for grain ages: 88.6 to 319.2 Ma
 Number of active grains (Num. used for fit): 19
 Number of removed grains: 0
 Degrees of freedom for fit: 16
 Average of the SE(Z)'s for the grains: 0.84
 Estimated width of peaks in PD plot in Z units: 0.98

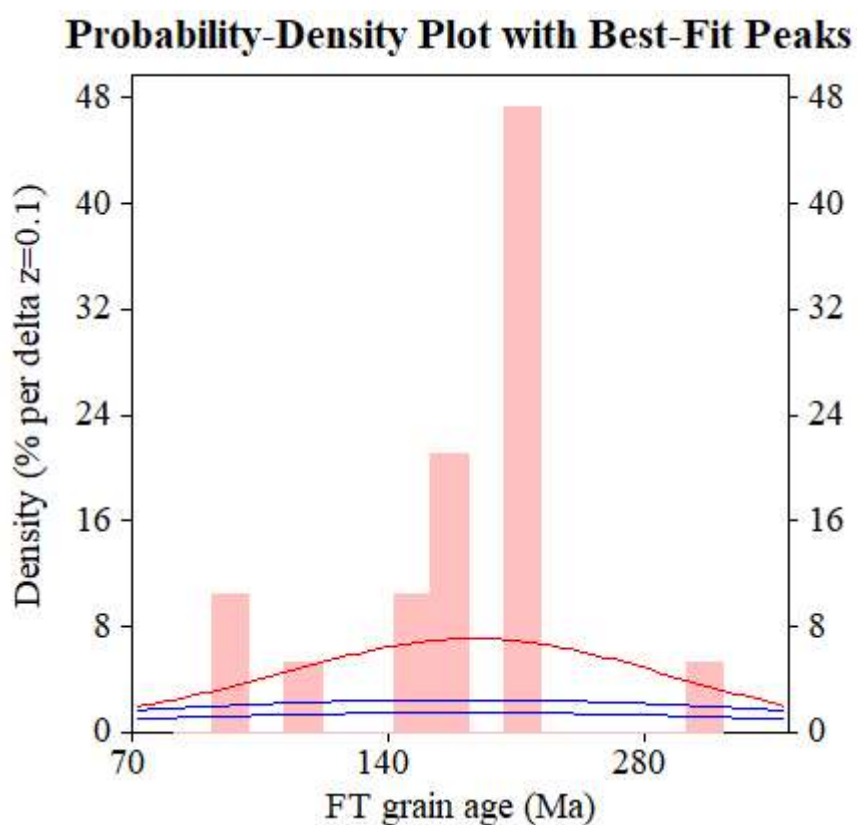
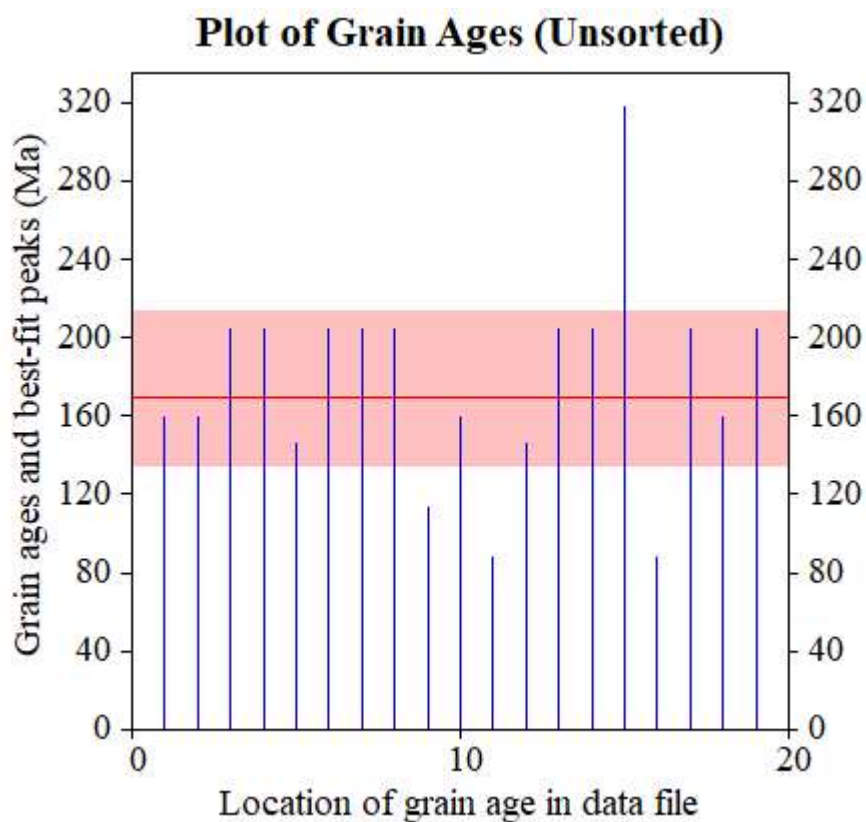
PARAMETERS FOR BEST-FIT PEAKS

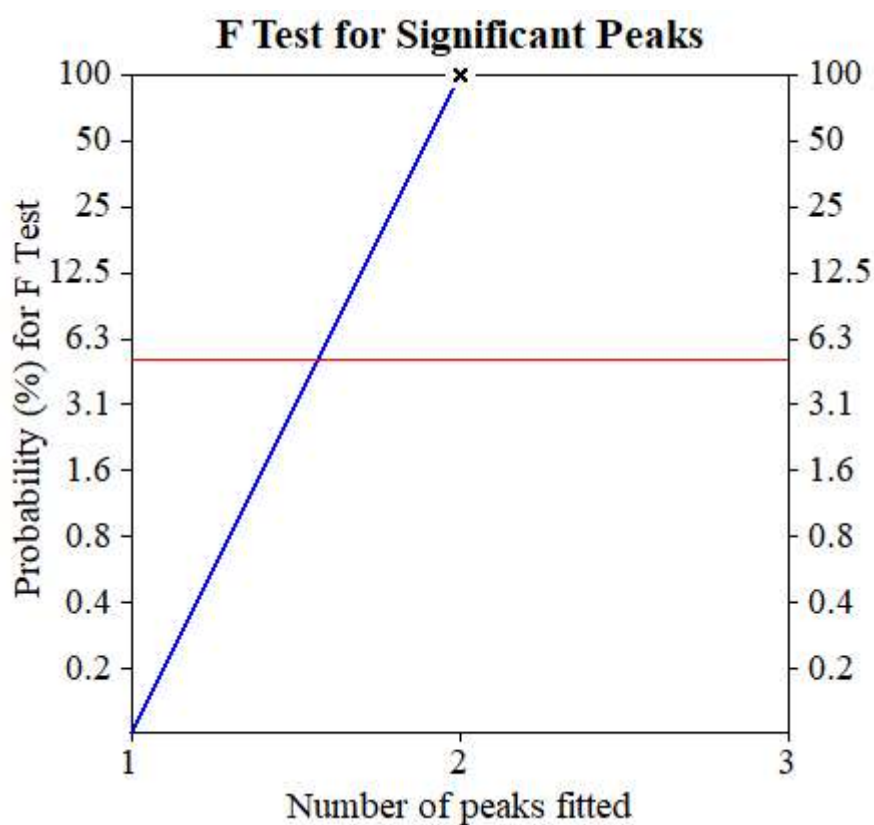
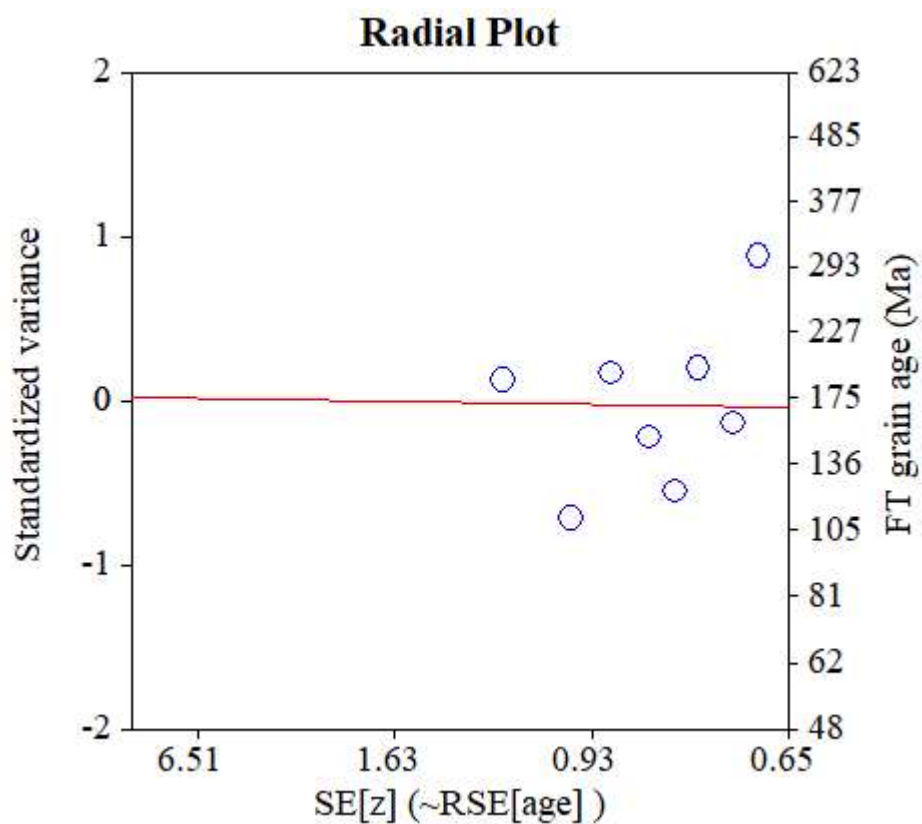
* *Standard error for peak age includes group error*

* *Peak width is for PD plot assuming a kernel factor = 0.60*

#.	Peak Age(Ma)	68%CI	95%CI	W(Z)	Frac(%)	SE,%	Count
1.	169.4	-34.9 ...+43.8	-61.6 ...+96.2	1.00	62.3	1347294.0	11.8
2.	169.4	-19.4 ...+21.9	-36.0 ...+45.5	1.00	37.7	1347294.0	7.2

Log-likelihood for best fit: -22.121
 Chi-squared value for best fit: 3.206
 Reduced chi-squared value: 0.200
 Probability for F test: 100%
 Condition number for COVAR matrix: 2753464000.00
 Number of iterations: 6





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SIZE OF COUNTER SQUARE (cm²): 6.01E-07

GRAIN AGES IN ORIGINAL ORDER

Grain no.	RhoS (cm ⁻²)	(Ns)	Rhol (cm ⁻²)	(Ni)	Squares	U+/-2s	Grain Age (Ma)
					Age	--95% CI--	
1	3.33E+05	(3)	3.33E+05	(3)	15	3 3 204.3	27.7 1389.0
2	1.11E+05	(1)	2.22E+05	(2)	15	2 3 109.5	1.8 1737.2
3	2.38E+05	(2)	2.38E+05	(2)	14	2 3 204.3	15.0 2369.7
4	2.78E+05	(2)	2.78E+05	(2)	12	3 3 204.3	15.0 2369.7
5	2.78E+05	(2)	2.78E+05	(2)	12	3 3 204.3	15.0 2369.7
6	2.22E+05	(2)	3.33E+05	(3)	15	3 3 140.1	11.5 1107.4
7	2.78E+05	(3)	4.63E+05	(5)	18	4 4 125.8	19.3 610.5
8	2.78E+05	(2)	2.78E+05	(2)	12	3 3 204.3	15.0 2369.7
9	3.70E+05	(4)	4.63E+05	(5)	18	4 4 165.2	32.8 728.9
10	2.78E+05	(2)	4.16E+05	(3)	12	4 4 140.1	11.5 1107.4
11	1.85E+05	(2)	1.85E+05	(2)	18	2 2 204.3	15.0 2369.7
12	2.22E+05	(2)	2.22E+05	(2)	15	2 3 204.3	15.0 2369.7
13	1.11E+05	(1)	2.22E+05	(2)	15	2 3 109.5	1.8 1737.2
14	2.22E+05	(2)	2.22E+05	(2)	15	2 3 204.3	15.0 2369.7
15	1.39E+05	(1)	1.39E+05	(1)	12	1 2 204.3	2.6 8126.3
16	4.16E+05	(3)	2.78E+05	(2)	12	3 3 297.1	35.6 2941.9
17	3.17E+05	(4)	4.76E+05	(6)	21	4 3 138.6	28.6 558.8
18	1.59E+05	(2)	2.38E+05	(3)	21	2 2 140.1	11.5 1107.4
19	1.39E+05	(1)	5.55E+05	(4)	12	5 5 57.0	1.1 504.3
20	3.33E+05	(3)	3.33E+05	(3)	15	3 3 204.3	27.7 1389.0

POOLED 2.45E+05(44) 3.12E+05(56) 299 3 1 161.2 106.3 242.2

CHI^2 PROBABILITY (%):100.0

>>> Beware: possible upward bias in Chi^2 probability due to low counts <<<

POOLED AGE W/ 68% CONF. INTERVAL(Ma): 161.2, 129.4 -- 200.2 (-31.8 +39.1)

95% CONF. INTERVAL(Ma): 106.3 -- 242.2 (-54.9 +81.0)

CENTRAL AGE W/ 68% CONF. INTERVAL(Ma): 161.0, 131.7 -- 196.7 (-29.3 +35.7)

95% CONF. INTERVAL(Ma): 108.6 -- 238.3 (-52.4 +77.3)

AGE DISPERSION (%): 0.1

FIT OPTION: Best-fit peaks using the binomial model of Galbraith and Green

INITIAL GUESS FOR MODEL PARAMETERS (number of peaks to fit = 2)

Peak #.	Peak Age	Theta	Fraction(%)	Count
1.	166.60	0.449	26.2	5.24
2.	110.10	0.349	18.7	3.73

Total range for grain ages: 68.8 to 284.2 Ma
 Number of active grains (Num. used for fit): 20
 Number of removed grains: 0
 Degrees of freedom for fit: 17
 Average of the SE(Z)'s for the grains: 0.87
 Estimated width of peaks in PD plot in Z units: 1.01

PARAMETERS FOR BEST-FIT PEAKS

- * Standard error for peak age includes group error
- * Peak width is for PD plot assuming a kernel factor = 0.60

#.	Peak Age(Ma)	68%CI	95%CI	W(Z)	Frac(%)	SE,%	Count
1.	161.0	-34.2 ...+43.2	-60.2 ...+95.4	1.05	60.4	5566770.0	12.1
2.	161.0	-19.6 ...+22.2	-36.1 ...+46.4	1.05	39.6	5566770.0	7.9

Log-likelihood for best fit: -22.140
 Chi-squared value for best fit: 2.879
 Reduced chi-squared value: 0.169
 Probability for F test: 100%
 Condition number for COVAR matrix: 43965840000.00
 Number of iterations: 6

