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APPENDIX A

Apatite Fission Track Analytical Data

Table A.1: Apatite Fission Track Analytical Data Apuseni Mountains

Sample Code	Age data ^a										Length data ^b					
	N _{Gr.}	ρ _s (×10 ⁶ cm ⁻²)	N _s	ρ _i	N _i	Age _{Cent.} ± 1σ (Ma)	P(χ ²) (%)	Disp. Age ± 1σ (Ma)	U (ppm)	D _{par} ± SD _{D_{par}} (μm)	MTL ± 1σ (μm)	SD _L	N _L	D _{par} ± SD _{D_{par}} (μm)		
RO-13	21	0.288	187	0.711	462	67.5 ± 8.9	98	0	67.5 ± 8.9	8.9	2.1 ± 0.3	15.06 ± 0.09	0.91	108	2.2 ± 0.3	
RO-14	15	0.045	30	0.342	228	21.7 ± 5.0	78	24	22.0 ± 4.8	5.7	2.3 ± 0.4	14.72 ± 0.20	0.79	15	2.1 ± 0.5	
RO-15	21	0.152	66	0.557	242	54.9 ± 11.4	5	45	45.5 ± 7.8	5.5	1.4 ± 0.2	13.42 ± 0.20	1.25	38	1.3 ± 0.1	
RO-16	7	0.808	358	2.650	1174	53.5 ± 7.4	1	18	56.1 ± 4.9	29.9	1.3 ± 0.1	14.18 ± 0.20	1.14	33	1.3 ± 0.2	
RO-18	11	0.046	13	0.404	115	18.9 ± 5.8	86	0	18.9 ± 5.8	4.5	1.7 ± 0.2	12.24 ± 0.97	1.94	4	1.8 ± 0.2	
RO-20	4	0.026	4	2.776	42	15.9 ± 8.5	97	0	15.9 ± 8.5	3.4	2.3 ± 0.4	14.68 ± 0.39	1.55	16	2.1 ± 0.4	
RO-22	27	0.090	117	1.329	1735	11.3 ± 1.6	72	1	11.3 ± 1.6	14.8	2.2 ± 0.4	15.24 ± 0.18	0.89	25	2.1 ± 0.5	
RO-23	22	1.074	473	3.004	1323	58.6 ± 7.7	<1	27	60.1 ± 5.9	33.6	1.7 ± 0.3	13.55 ± 0.19	1.28	44	1.3 ± 0.2	
RO-25	15	1.424	544	2.897	1107	81.8 ± 9.2	95	0	81.8 ± 9.2	32.2	1.6 ± 0.3	13.17 ± 0.89	2.35	7	1.6 ± 0.3	
RO-27	34	0.282	667	0.765	1808	61.1 ± 6.8	57	7	61.5 ± 6.7	8.1	1.7 ± 0.2	14.65 ± 0.11	1.01	90	1.6 ± 0.2	
RO-28	28	0.233	305	1.198	1567	30.3 ± 4.0	12	23	32.5 ± 3.8	18.1	1.7 ± 0.4	14.57 ± 0.15	1.03	46	1.6 ± 0.4	
RO-31	34	0.642	521	2.084	1692	45.9 ± 5.7	<1	27	46.8 ± 3.4	29.9	2.1 ± 0.2	13.87 ± 0.40	1.49	14	1.9 ± 0.3	
RO-34	38	0.067	216	0.441	1428	25.3 ± 3.1	82	2	25.3 ± 3.1	5.1	1.4 ± 0.3	14.09 ± 0.18	1.48	66	1.5 ± 0.2	
RO-35	34	0.176	485	0.491	1356	59.4 ± 6.9	22	14	59.7 ± 6.7	5.8	1.5 ± 0.1	14.17 ± 0.08	0.92	130	1.5 ± 0.2	
RO-36	5	0.124	13	0.409	43	50.5 ± 16.7	62	0	50.5 ± 16.7	4.7	1.2 ± 0.2	-	-	-	-	
RO-37	8	0.042	22	0.089	47	78.0 ± 21.6	93	0	78.0 ± 21.6	1.1	1.3 ± 0.3	13.37 ± 0.29	1.50	26	1.3 ± 0.1	

^aN_{Gr.} is number of dated apatite crystals; ρ_s (ρ_i) are spontaneous (induced) track densities; N_s (N_i) are the number of spontaneous (induced) tracks counted; dosimeter track density (ρ_d) for this set of samples is 1.038 × 10⁶ tracks/cm² with 14,642 tracks counted on the dosimeter (N_D); Age_{Cent.} ± 1σ is central age ± 1σ standard error [Galbraith and Laslett, 1993]; P(χ²) is probability obtaining Chi-square (χ²) for n degrees of freedom (where n is number of crystals minus 1) [Galbraith, 1981; Green, 1981; Brandon, 1992]; Disp. is dispersion in single grain ages [Galbraith and Laslett, 1993]; Age is pooled age for samples that pass P(χ²) at 5%, otherwise mean age is reported (in italics) [Green, 1992]; ± 1σ is 1σ standard error; U is U-content in parts per million; D_{par} is average etch pit diameter with SD_{D_{par}} its standard deviation.

^bMTL ± 1σ is c-axis projected mean track length [Donelick *et al.*, 1999] ± 1σ standard error; SD_L is standard deviation of track length distribution; N_L is number of measured horizontal confined tracks; D_{par} is average etch pit diameter with SD_{D_{par}} its standard deviation.

Table A.2: Apatite Fission Track Analytical Data SE Carpathians

Sample Code	Age Data ^a											Length Data ^b						
	N _{Gr.} (×10 ⁶ cm ⁻²)	ρ _s (×10 ⁶ cm ⁻²)	N _s	ρ _i (×10 ⁶ cm ⁻²)	N _i	P(χ ²) (%)	Disp. (%)	Age ± 1σ (Ma)	U (ppm)	D _{par} ± SD _{Dpar} (μm)	Pop.	Age (Ma)	95% CI (-/+)	Ab. (%)	MTL ± 1σ (μm)	SD _L	N _L	D _{par} ± SD _{Dpar} (μm)
RO-02	80	0.372	1742	1.403	6570	0	68	37.8 ± 4.9	17.8	1.7 ± 0.3	1	13.9	3.4/4.5	34	13.77 ± 0.12	1.14	86	1.3 ± 0.3
											2	40.7	8.1/10.1	51				
											3	108.5	21.1/26.1	14				
RO-04	51	0.593	1056	2.177	3879	0	40	51.1 ± 6.2	24.3	1.6 ± 0.4	1	35.2	7.0/8.7	62	13.25 ± 0.14	1.15	68	1.2 ± 0.3
											2	78.2	17.9/23.2	38				
											3	149.7	49.8/74.3	10				
RO-05	37	0.399	534	2.042	2732	0	63	38.3 ± 5.9	24.3	1.7 ± 0.4	1	18.3	4.2/5.5	45	13.54 ± 0.10	1.13	120	1.6 ± 0.4
											2	45.7	9.9/12.6	45				
											3	149.7	49.8/74.3	10				
RO-06	76	0.199	1056	1.455	7719	0	36	23.1 ± 2.6	16.6	1.5 ± 0.3	1	16.4	3.4/4.2	57	12.35 ± 0.10	1.12	136	1.2 ± 0.3
											2	32.5	6.5/8.1	43				
											3	149.7	49.8/74.3	10				
RO-07	40	0.055	205	1.321	4895	0	48	7.2 ± 1.1	15.1	1.5 ± 0.3	1	3.8	1.3/1.9	47	11.62 ± 0.33	1.85	31	1.2 ± 0.2
											2	10.5	2.7/3.6	53				
											3	149.7	49.8/74.3	10				
RO-08	21	0.092	96	1.242	1291	1	27	12.7 ± 2.0	13.4	1.5 ± 0.3	-	-	-	-	11.73 ± 0.29	1.94	46	1.1 ± 0.2
											1	50.3	11.6/15.1	52	14.04 ± 0.11	0.86	61	1.1 ± 0.1
											2	92.5	20.3/25.9	48				
RO-10	32	0.265	354	0.418	559	59	18	107.3 ± 13.8	4.9	1.4 ± 0.1	-	-	-	-	12.71 ± 0.21	1.43	48	1.0 ± 0.1
											1	37.6	7.3/9.0	83	14.21 ± 0.13	0.98	60	1.2 ± 0.4
											2	97.9	26.7/36.6	17				
RO-11	43	0.586	913	2.218	3458	0	41	46.9 ± 5.9	24.3	1.5 ± 0.2	1	37.6	7.3/9.0	83	14.21 ± 0.13	0.98	60	1.2 ± 0.4
											2	97.9	26.7/36.6	17				
											3	149.7	49.8/74.3	10				
RO-12	55	0.305	829	1.023	2786	7	20	48.5 ± 5.5	11.3	1.5 ± 0.2	-	-	-	-	12.93 ± 0.12	1.17	89	1.1 ± 0.2
											1	50.3	11.6/15.1	52				
											2	92.5	20.3/25.9	48				

^aN_{Gr.} is number of dated apatite crystals; ρ_s (ρ_i) are spontaneous (induced) track densities; N_s (N_i) are the number of spontaneous (induced) tracks counted; dosimeter track density (ρ₀) for this set of samples is 1.032 × 10⁶ tracks/cm² with 15,177 tracks counted on the dosimeter (N₀); P(χ²) is probability obtaining Chi-square (χ²) for n degrees of freedom (where n is number of crystals minus 1) [Galbraith, 1981; Green, 1981; Brandon, 1992]; Disp. is dispersion in single grain ages [Galbraith and Laslett, 1993]; Age is central age ± 1σ standard error [Galbraith and Laslett, 1993]; U is U content in parts per million; D_{par} is average etch pit diameter with SD_{Dpar} its standard deviation; Pop. 1, 2 and 3 are age populations calculated with BINOMFIT [Brandon, 2002] for samples that do not pass P(χ²) at 5% and with dispersions >30%; 95% CI is the 95% confidence level for the population; Ab. is the abundance of the age component in the total single grain age distribution of a sample.

^bMTL ± 1σ is c-axis projected mean track length [Donelick et al., 1999] ± 1σ standard error; SD_L is standard deviation of track length distribution; N_L is number of measured horizontal confined tracks; D_{par} is average etch pit diameter with SD_{Dpar} its standard deviation.



Southward view on the Mezeş Mountains: Mezeş basement has been thrust eastwards over Paleogene sediments, creating a jump in elevation across the fault.
Fieldwork 2007, Apuseni Mountains.