Supplementary file

Timing multi-phase, multi-directional structural deformations in the southern Sichuan Basin utilizing low-temperature thermochronology

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Wang, Y., Ren, R., Chen., Z., Su, N. Timing multi-phase, multi-directional structural deformations in the southern Sichuan Basin utilizing low-temperature thermochronology. Advances in Geo-Energy Research, 2026, 22(2): 118-133.

The link to this file is: https://doi.org/10.46690/ager.2026.11.03

Appendix A

Table S1 provides the apatite (U-Th)/He analytical results for 69 analyzed grains from the southern Sichuan fold-thrust belt. Grains marked with superscript "a" were excluded from thermal history modeling.

Table S1. Apatite (U-Th)/He age results for the southern Sichuan fold-thrust belt.

Sample ID	Mass (ug)	Rs (um)	U (ppm)	Th (ppm)	[eU] (ppm)	Raw age (Ma)	± σ (Ma)	FT	Corrected age (Ma)	± σ (Ma)
LC-5-A1	1.72	41.3	7.4	22.9	12.8	19.34	0.52	0.663	29.17	1.66
LC-5-A2	4.24	56.6	4.5	47.9	15.8	21.69	0.56	0.734	29.55	1.66
LC-5-A3	2.79	46.8	6.4	27.8	12.9	19.01	0.49	0.694	27.39	1.54
LC-5-A4	1.30	38.1	2.6	13.5	5.8	7.76	0.30	0.632	12.28	0.78
							Mean age		28.60	1.70 （5.9）
SD-12-A1	1.66	40.7	0.3	80.6	19.3	10.75	0.34	0.63	17.06	1.01
SD-12-A2	2.55	49.3	0.9	33.5	8.8	10.39	0.31	0.689	15.08	0.88
SD-12-A3	1.78	41.3	4.6	109.5	30.3	15.55	0.44	0.636	24.45	1.40
							Mean age		15.90	1.20 (7.5)
XW-1-A1	0.77	31.6	1.0	46.0	11.8	5.78	0.21	0.544	10.63	0.66
XW-1-A2	1.45	38.6	17.7	29.2	24.6	20.01	0.56	0.643	31.12	1.78
XW-1-A3	1.09	35.0	1.6	40.4	11.1	6.62	0.21	0.584	11.34	0.67
XW-1-A4	0.99	34.2	1.8	49.8	13.5	6.31	0.29	0.575	10.97	0.75
							Mean age		10.96	0.68 (6.2)
XW-5-A1	0.98	35.5	35.9	52.6	48.3	14.00	0.40	0.617	22.69	1.31
XW-5-A2	1.29	36.9	7.9	51.5	20.0	14.45	0.51	0.616	23.46	1.44
XW-5-A3	1.04	34.7	17.5	46.4	28.4	10.03	0.26	0.609	16.47	0.93
XW-5-A4	0.74	32.2	109.5	96.0	132.1	16.56	0.48	0.588	28.16	1.63
							Mean age		23.00	1.80 (7.8)
XW-7-A1	1.80	42.2	0.3	16.4	4.2	2.01	0.12	0.646	3.11	0.24
XW-7-A2	2.25	46.0	28.3	72.6	45.4	12.51	0.32	0.696	17.97	1.01
XW-7-A3	5.11	58.3	18.4	37.1	27.1	22.08	0.56	0.757	29.17	1.64
XW-7-A4	2.35	44.5	21.3	63.8	36.3	16.20	0.42	0.684	23.68	1.33
							Mean age		21.80	1.40 (6.4)
CN-7-A1	1.86	43.0	2428.4	1703.9	2828.8	0.40	0.01	0.684	0.58	0.03
CN-7-A2	1.11	37.0	20.4	99.3	43.8	7.49	0.21	0.617	12.14	0.70
CN-7-A3	4.44	63.5	3.1	22.3	8.4	13.16	0.34	0.761	17.29	0.97
CN-7-A4	1.99	42.4	1.2	23.1	6.7	10.80	0.33	0.65	16.62	0.97

Sample ID	Mass (ug)	Rs (um)	U (ppm)	Th (ppm)	[eU] (ppm)	Raw age (Ma)	± σ (Ma)	FT	Corrected age (Ma)	± σ (Ma)
							Mean age		16.90	1.30 (7.7)
CN-8-A1	1.96	43.5	2.9	24.2	8.6	10.68	0.32	0.667	16.01	0.93
CN-8-A2	1.27	37.2	6.9	67.3	22.7	9.08	0.26	0.615	14.76	0.85
CN-8-A3	1.25	39.0	6.5	42.8	16.5	4.53	0.12	0.631	7.18	0.41
CN-8-A4	1.84	40.6	40.4	84.1	60.2	11.82	0.31	0.66	17.91	1.01
							Mean age		15.97	0.99 (6.2)
CN-15-A1	8.68	67.0	487.2	344.3	568.1	18.02	0.52	0.793	22.72	1.31
CN-15-A2	2.86	52.0	19.0	18.6	23.4	37.73	1.06	0.734	51.40	2.95
CN-15-A3	11.17	78.1	1.7	7.4	3.4	18.47	0.52	0.811	22.77	1.31
CN-15-A4	4.11	52.5	19.0	82.7	38.4	22.74	0.53	0.724	31.41	1.73
							Mean age		22.70	1.80 (7.9)
CN-16-A1	1.09	36.0	57.2	106.6	82.3	24.40	0.64	0.619	39.42	2.23
CN-16-A2	0.86	34.6	3.7	33.4	11.6	17.26	0.58	0.586	29.45	1.77
							Mean age		33.00	2.60 (7.9)
WZ-1-A2	0.74	31.5	21.0	72.1	37.9	19.45	0.52	0.571	34.06	1.93
WZ-1-A3	0.62	31.6	4293.9	2905.6	4976.8	18.27	0.53	0.577	31.66	1.83
							Mean age		32.80	2.60 (7.9)
WZ-3-A2	0.72	32.5	40.1	64.8	55.4	20.57	0.58	0.586	35.10	2.01
WZ-3-A4	0.79	31.3	173.7	1078.4	427.1	14.97	0.37	0.558	26.83	1.50
							Mean age		35.10	2.01 (5.7)
WZ-4-A1	1.30	37.2	15.3	65.0	30.6	14.02	0.35	0.625	22.43	1.25
WZ-4-A2	2.53	44.8	28.8	59.2	42.7	22.41	0.57	0.689	32.53	1.82
WZ-4-A3	1.25	38.5	10.2	215.1	60.7	16.10	0.44	0.615	26.18	1.49
WZ-4-A4	1.14	36.1	39.0	183.8	82.1	16.16	0.39	0.615	26.28	1.46
							Mean age		24.70	1.50 (6.1)
WZ-5-A1[a]	0.97	34.3	15.0	153.8	51.2	24.75	0.62	0.578	42.82	2.39
WZ-5-A2	0.77	32.6	4.9	301.1	75.6	3.83	0.12	0.546	7.01	0.41
WZ-5-A3[a]	1.40	39.4	29.8	69.1	46.0	1355.48	32.17	0.646	2098.27	116.13
							Mean age		7.01	0.41 (5.9)
WZ-9-A1	1.43	38.8	3.4	39.4	12.7	3.64	0.12	0.621	5.86	0.35
WZ-9-A2	1.08	38.2	4.2	39.6	13.5	2.60	0.11	0.613	4.24	0.28
WZ-9-A3	1.19	36.6	3.0	29.4	9.9	5.38	0.18	0.61	8.82	0.53
WZ-9-A4	0.87	35.3	4.2	53.1	16.7	4.55	0.15	0.581	7.83	0.47

Sample ID	Mass (ug)	Rs (um)	U (ppm)	Th (ppm)	[eU] (ppm)	Raw age (Ma)	± σ (Ma)	FT	Corrected age (Ma)	± σ (Ma)
							Mean age		8.26	0.64 (7.7)
TG-1-A1[a]	0.82	32.3	5.7	53.7	18.3	3.65	0.11	0.565	6.46	0.38
TG-1-A2[a]	0.62	29.8	1.0	58.2	14.7	4.45	0.19	0.522	8.52	0.56
TG-1-A3	0.58	30.3	4.9	83.3	24.5	8.05	0.24	0.528	15.25	0.89
TG-1-A4	1.03	34.3	2.2	103.3	26.5	13.51	0.42	0.574	23.54	1.39
							Mean age		15.25	0.89 (5.8)
TG-6-A1[a]	3.32	20.9	0.7	10.2	3.1	6.30	0.39	0.707	8.91	0.71
TG-6-A2	3.93	52.1	0.7	9.5	3.0	12.76	0.36	0.713	17.90	1.03
TG-6-A3	6.32	61.4	0.6	11.8	3.3	9.28	0.27	0.75	12.37	0.72
TG-6-A4	7.00	64.0	4.5	28.8	11.3	14.17	0.35	0.768	18.45	1.03
							Mean age		18.20	1.30 (7.1)
TG-10-A1[a]	0.60	29.6	11.0	246.2	68.8	14.50	0.42	0.524	27.67	1.60
TG-10-A2	0.88	31.6	27.4	871.8	232.2	3.95	0.11	0.542	7.29	0.42
TG-10-A3	1.68	41.1	2.3	438.6	105.4	6.67	0.20	0.634	10.52	0.61
							Mean age		8.30	0.60 (7.2)
YB-1-A1	1.04	37.0	21.7	136.6	53.8	17.11	0.41	0.614	27.87	1.55
YB-1-A2	0.70	31.7	26.0	180.0	68.3	14.55	0.39	0.555	26.22	1.49
YB-1-A3	0.72	32.8	10.0	204.7	58.1	12.11	0.38	0.557	21.74	1.28
YB-1-A4	0.76	33.4	29.0	178.9	71.0	16.25	0.42	0.578	28.11	1.58
							Mean age		27.30	1.60 (5.9)
YB-4-A1[a]	3.05	50.3	2.1	16.2	5.9	0.34	0.05	0.709	0.48	0.07
YB-4-A2	1.86	41.9	42.1	65.3	57.4	20.49	0.55	0.67	30.58	1.74
YB-4-A3	5.11	59.9	40.8	43.9	51.1	29.41	0.81	0.769	38.24	2.18
							Mean age		33.50	2.60 (7.8)
YB-6-A1	1.55	41.0	7.6	56.6	20.9	10.34	0.27	0.646	16.01	0.90
YB-6-A2	2.02	42.1	1.6	20.0	6.3	9.80	0.28	0.648	15.12	0.87
YB-6-A3	1.88	43.0	3.6	27.6	10.1	18.31	0.47	0.659	27.78	1.56
							Mean age		15.50	1.10 (7.1)