Table 1 New zircon fission track data

Sample	Longitude	Latitude	Elevation	Strata age	N	RhoS (e^5)	Ns	RhoI (e^5)	Ni	P (%)	Nd	RhoD	Central age	
071401	120.962	24.031	712	Eocene	18	14.445	2578	15.1	2695	0.3	4798	11.2	14.3±0.9	P
071402	120.989	23.976	625	Eocene	19	3.446	632	24.13	4425	93.7	4798	21	4.1±0.3	R
072001	120.936	23.866	912	Eocene	17	17.678	2522	18.407	2626	0	4798	9.1	11.7±1	P
072002	120.970	23.899	739	Eocene	17	4.869	362	31.705	2357	78.9	4798	21	4.4±0.3	R
072003	120.980	23.917	668	Eocene	18	4.831	526	15.649	1704	96.4	4798	9.1	3.8±0.3	R
072004	120.982	23.925	668	Eocene	16	4.275	230	39.579	2129	15.2	4789	21	3.1±0.3	R
072005	120.995	23.977	501	Eocene	13	3.563	422	12.149	1439	35.0	4789	9.1	3.6±0.3	R
072006	120.910	23.984	425	Eocene	18	16.508	4366	14.191	3753	0	8875	9.1	13.9±1.3	P
100501	120.984	23.972	486	Eocene	17	3.337	264	16.443	1301	100	4798	11.2	3.1±0.3	R
100502	121.008	24.081	726	Eocene	18	4.219	368	20.409	1780	100	4798	11.2	3.2±0.2	R
100503	121.027	24.091	778	Eocene	18	7.289	602	34.59	2857	27.1	4798	12.96	3.7±0.3	R
100504	121.038	24.093	698	Eocene	18	5.784	572	30.227	2989	81.6	8875	12.96	3.4±0.2	R
Meiyuan	120.976	24.073	425	Eocene	20	0.504	1191	0.349	824	0	4798	13	23.2±2.5	P
Beikou 23	121.130	24.195	2820	Eocene	18	8.067	394	28.789	1404	84.6	4789	10.47	4.1±0.3	R
Beikoi 24	121.124	24.196	3037	Eocene	15	8.142	465	30.998	1736	28.1	4789	10.47	3.9±0.3	R
Beikou 28	121.140	24.195	2806	Eocene	14	8.867	86	36.122	350	33.4	4789	10.47	3.6±0.5	R
Beikou Mt	121.109	24.203	3310	Eocene	19	9.963	426	30.1	1287	6.2	4789	10.47	4.8±0.4	R
D1201	120.998	23.979	513	Eocene	19	7.345	148	34.839	702	74.7	4798	1.03	3.7±0.4	R
D1202	121.034	23.994	577	Eocene	23	12.803	322	48.628	1223	57.4	4798	1.03	4.6±03	R
D1206	121.105	24.009	906	Eocene	24	15.65	268	65.343	1119	13.6	4798	1.03	4.2±0.4	R
D1207	121.110	24.008	1193	Eocene	23	14.815	180	45.35	551	95.1	4798	1.03	5.7±0.5	R
D1208	121.128	24.0157	836	Miocene	10	101.081	374	40	148	45.9	8875	1.03	44.1±4.6	P
D1209	121.145	24.025	1263	Miocene	9	97.241	564	45	261	0	8875	1.03	31.7±6	P
T1	121.305	24.433	3325	Eocene	21	13.887	324	37.846	883	0	4798	16.56	7.4±0.8	P
T2	121.303	24.430	3060	Eocene	20	10.524	518	24.828	1222	0	4798	13.47	7.8±1.1	P
T3	121.305	24.420	2716	Eocene	20	10.855	374	24.844	856	0	4798	13.47	7.3±0.8	P
T4	121.309	24.413	2400	Eocene	17	9.02	308	32.3	1103	11.9	4798	13.47	4.8±0.4	R
T5	121.315	24.409	2100	Eocene	14	16.969	382	22.833	514	0	4798	13.47	10.1±2	P
T6	121.309	24.406	1900	Eocene	16	12.21	308	22.42	676	0	4798	13.47	7.3±1.1	P
Lee 10	121.318	24.342	1900	Miocene	19	58.437	1502	34.821	895	0	4798	12.42	23.2±3.4	P
TC005	120.978	24.187	650	Eocene	11	72.024	772	44.875	481	1.1	4798	12.24	25.3±2.4	P
TC006	120.993	24.200	700	Eocene	16	6.876	262	39.866	1519	29.6	4798	13.9	3±0.2	R
TC007	121.047	24.226	1050	Eocene	17	5.662	238	36.065	1516	46.1	4798	13.9	2.7±0.2	R
TC012	121.075	24.238	1100	Eocene	17	8.704	296	52.84	1797	39.8	4798	12.42	2.5±0.2	R

TC014	121.1	24.246	1000	Eocene	16	7.985	206	38.958	1005	26.9	4798	12.42	3.2±0.3	R
TC015	121.087	24.246	950	Eocene	24	6.71	236	42.021	1478	5.1	4798	12.24	2.5±0.2	R
Yu-Mt	120.957	23.470	3952	Eocene	19	7.784	228	47.044	1378	88.2	4798	21	5±0.4	R
YS-03	120.955	23.469	3766	Eocene	21	9.552	358	75.427	2827	33.7	8875	27	4.9±0.4	R
YS-06	120.920	23.472	2900	Eocene	15	0.0031	176	0.273	1567	87.0	8875	27	4.4±0.4	R
Ys-11	120.872	23.709	1000	Oligocene	8	4.124	1436	1.364	475	19.1	4798	8	34.7±2.7	P
Ys-12	120.872	23.709	1000	Oligocene	14	32.613	1895	13.871	806	0.1	4798	8	26.6±2.3	P
Ys-13	120.875	23.660	1100	Eocene	14	7.418	200	18.396	496	44.3	4798	9.1	5.3±0.5	R
Ys-16	120.953	23.554	1450	Eocene	13	4.395	276	26.545	1667	12.2	4798	14	3.2±0.3	R
Ys-18	120.936	23.553	1430	Eocene	12	4.46	188	24.387	1028	45.7	4798	14	3.7±0.3	R
Ys-19	120.928	23.556	1415	Eocene	15	3.316	184	17.476	969	70.7	4798	14	3.9±0.4	R
Ys-20	120.920	23.530	900	Miocene	7	11.408	184	24.676	398	0	4798	12.95	10.5±4.1	P
Taba Mt	121.258	24.459	3337	Eocene	28	83.532	1417	65.022	1103	0	4798	9.1	14.6±2.4	P
Hsueh Mt	121.223	24.386	3886	Eocene	32	7.855	662	33.393	2931	74	4798	13.9	4.1±0.2	R
30-07	120.941	23.793	392	Eocene	25	27.925	666	36.437	869	0	4789	11.37	11.7±1.8	P
30-08	120.938	23.793	388	Eocene	39	0.832	2326	0.843	2382	0	4789	11.37	13.1±1.4	P
30-10	120.907	23.7911	453	Eocene	21	21.129	860	19.237	783	0	4789	11.37	15.9±1.3	P
30-11	120.886	23.788	418	Eocene	34	52.852	3728	22.768	1606	0	4789	11.37	29.6±3.5	P
MsD	121.032	23.784	784	Eocene	23	10.966	330	45.327	1364	7.6	4789	11.37	3.5±0.3	R
30-6	120.959	23.794	500	Eocene	37	8.404	772	33.486	3076	8.0	8875	11.37	3.6±0.2	R
30-05	120.964	23.794	580	Eocene	33	2.352	832	10.191	3605	33.	8875	11.37	3.4±0.2	R
T7-13	121.450	24.640	1100	Eocene	13	16.961	388	58.575	1344	35.23	4798	11.98	4.7±0.4	R
T7-14	121.477	24.647	1114	Eocene	18	66.739	3250	30.166	3250	0	4798	10.89	29.7±4.7	P
LS-7	121.270	24.297	1540	Eocene	14	10.722	178	46.079	765	92.31	4789	11.89	3.8±0.3	R
Beidawu-2	22.616	120.752	2682	Eocene	24	29.458	910	38.781	1198	0	4789	13.29	8.4±1.8	P
Beidawu-Mt	22.627	120.761	3000	Eocene	15	7.923	316	28.584	1140	0.76	4789	13.27	4.9±0.5	R
Lee-8	121.237	24.238	2200	Eocene	9	25.087	344	7.73	106	0	4798	12.42	41.4±11	P
Dabajien Mt	121.258	24.459	3337	Eocene	21	83.532	1417	65.022	1103	0	4789	9.1	14.6±2.4	P

RhoS density of spontaneous tracks [10^5tr/cm^2]; N: number of crystal; Ns: number of spontaneous tracks; RhoI: density of induced tracks [105 tr/cm2]; Ni:number of induced tracks, Nd = 4789 tracks counted on NBS 610; P(χ2): probability that single grain ages are consistent and belong to the same population, test is passed if P(χ2) >5% (Galbraith 1981);Central ages are calculated using a ζ-value of 27.5 ± 1.0 (1σ).All the samples are metasandstone

Table 2 Previously published fission track data

Liu et al.,2000					
Sample	Longitude	Latitude	Strata age	Central Age(Ma)	
HI-101	121.791	24.857	Eocene	22.2	P
HI-103	121.717	24.911	Eocene	32.4	P
HI-104	121.632	24.952	Eocene	36.3	P
NH-201	121.52	24.62	Eocene	10.0	P
NH-202	121.51	24.61	Eocene	10.6	P
NH-203	121.46	24.65	Eocene	6.0	R
NH-204	121.45	24.64	Eocene	6.4	R
NH-205	121.37	24.69	Eocene	31.8	P
.NH-206	121.37	24.7	Eocene	30.2	P
W2	121.521	24.689	Eocene	5.4	R
CH-307	121.18	24.26	Eocene	3.1	R
CH-310	120.985	24.185	Miocene	33.7	P
CH-308	121.14	24.25	Eocene	4.3	R
P1	120.9	23.980	Eocene	4.7	R
SH-505	120.881	22.291	Miocene	57.9	P
SH-506	120.83	23.28	Miocene	51.2	P
SR-601	120.97	22.56	Miocene	6.0	R
SR-602	120.89	22.34	Miocene	47.9	P
SR-603	120.86	22.29	Miocene	62.5	P
Lee et al.,2006					
Sample	Longitude	Latitude	Strata age	Central Age(Ma)	
071401	120.6474	22.71338	Miocene	44.5±5.0	P
071406	120.6693	22.70465	Miocene	39.1±4.3	P
071403	120.6988	22.69488	Miocene	36.7±4.4	P
071108	120.6881	22.75189	Miocene	42.9±3.3	P
072104	120.7472	22.7419	Miocene	23.6±2.4	P
072101	120.7643	22.71698	Miocene	21.4±2.1	P
III	120.8445	22.69524	Mesozoic	5.3±0.7	R
II	120.8526	22.70994	Mesozoic	3.6±0.4	R
I	120.8751	22.72002	Mesozoic	5.2±0.8	R
021701	120.916	22.51836	Miocene	5.3±0.6	R
021801	120.9936	22.60326	Miocene	4.7±0.4	R
021802	120.9452	22.59638	Miocene	4.4±0.5	R
021803	120.9426	22.59438	Miocene	3.5±0.3	R

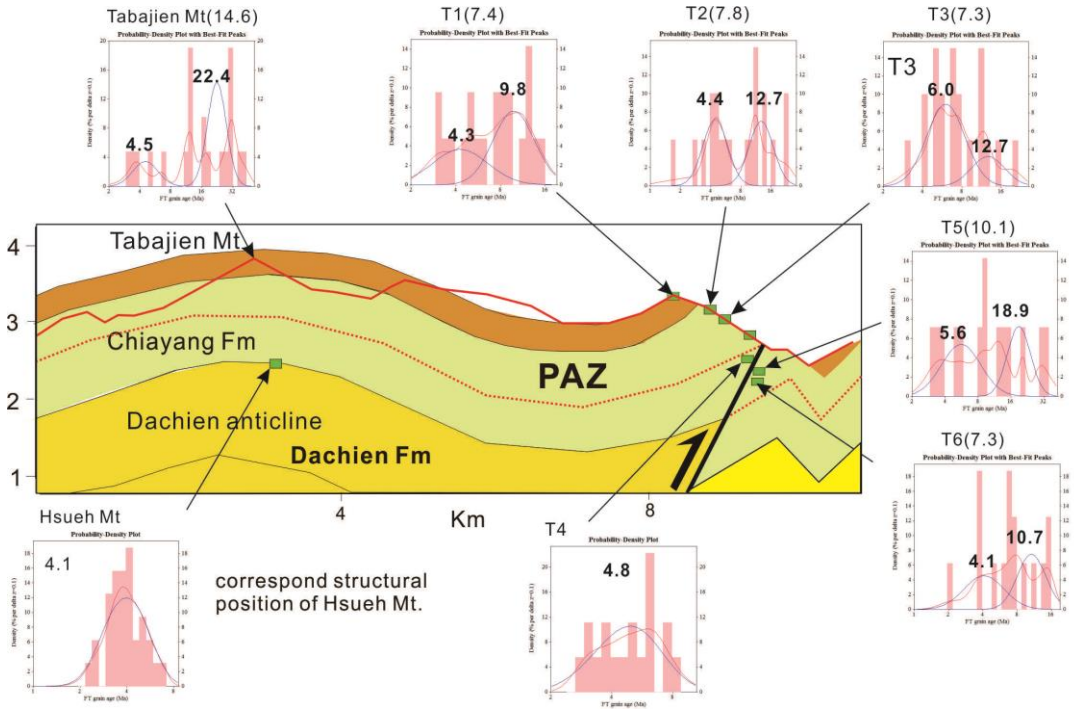
Fuller et al., 2006					
Sample	Longitude	Latitude	Strata age	Pooled Age(Ma)	
1-00	121.0101	22.648	Miocene	59.7±3.9	P
6-00	120.9518	22.511	Miocene	75.4±6.4	P
52-01	121.0494	22.760	Miocene	43.6±4.4	P

Table 3 Reset (samples: Mt Hsueh, T4, T7-13 and NH-203) and partially reset data and age distributions along two geologic cross-sections in the area of Mt Dabajien (see Fig. 1A for locations). Decomposition of fission track ages were based on BinomFit (Brandon, 1992, 2002). NH-201~206 were based on the original data of Liu et al. (2001). TAZ: total annealing zone; PAZ: partial annealing zone

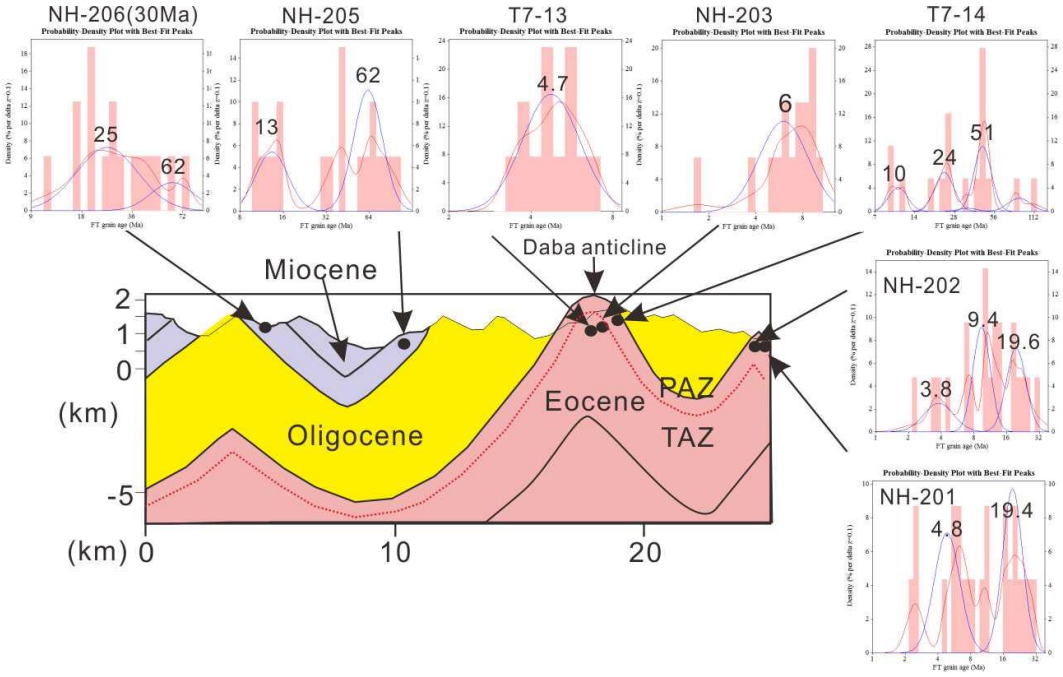
Brandon, M., 1992, Decomposition of fission-track grain-age distributions: American Journal of Science, v. 292, p. 535-564.

-, 2002, Decomposition of mixed grain-age distribution using BINOM-FIT: On Track, v. 24, p. 13-18.

Liu, T.-K., Hsieh, S., Chen, Y.-G., and Chen, W.-S., 2001, Thermo-kinematic evolution of the Taiwan oblique-collision mountain belt as revealed by zircon fission track dating: Earth and Planetary Science Letters, v. 186, p. 45-56.



Sample	Grain	Grain age distribution (Ma)		Deposition age	Age component					
		Min	Max		P1 (Ma)	Error (95%)	P2 (Ma)	Error (95%)	P3 (Ma)	Error (95%)
Dabajien MT	21	3.0	43.3	Eocene	4.5 (24.2%)	-0.5~ +0.6	22.4 (75.8%)	-1.4~ +1.5		
T1	21	3.0	15.3	Eocene	4.3 (38.9%)	-0.7~ +0.8	9.8 (61.1%)	-1.2~ +1.7		
T2	21	1.7	44.6	Eocene	4.4 (48.7%)	-0.4~ 0.4	12.6 (45.4%)	-1.1~ +1.2	41 (5.9%)	-13.2~ +19.4
T3	20	3.1	20.1	Eocene	6.0 (75.8%)	-0.5~ +0.6	12.7 (24.2%)	-1.7~ +1.9		
T5	14	3.1	35.2	Eocene	5.6 (55.8%)	-0.8~ +0.9	18.9 (44.2%)	-1.8~ +2.0		
T6	16	2.1	15.6	Eocene	4.1 (46.1%)	-0.6~ +0.7	10.7 (53.9%	-2.0~ +2.5		



Sample	Grain	Grain age distribution (Ma)		Deposition age	Age component					
		Min	Max		P1 (Ma)	Error (95%)	P2 (Ma)	Error (95%)	P3 (Ma)	Error (95%)
NH-206	16	10.8	72.9	Mocene	25.5 (76.4%)	-11.4~ +20.6	62.2 (23.6%)	-28.2~ +51.5		
NH-205	20	10.7	103.5	Miocene	13.3 (35.4%)	-2.4~ +3.0	62.4 (62.6%)	-9.0~ +10.5		
T7-14	18	9.2	106.5	Eocene	10.4 (16.7%)	-1.8~ +27	24.7 (31.8%)	-3.9~ +4.6	51.1 (51.5%)	-6.4~ +7.4
NH-202	21	2.1	31.2	Eocene	3.8 (48.7%)	-1.0~ +1.4	9.4 (42.1%)	-1.4~ +1.6	19.6 (38.2%)	-3.2~ +3.8
NH-201	23	2.3	29.2	Eocene	4.8 (48.4%)	-0.8~ +1.0	19.4 (51.6%)	-2.8~ +3.3		