

Dunfeng Xiang, Qigui Mao, Wenjiao Xiao, Jintao Wei, David Chew, Zhiyuan He, Hang Zhao, Guoxiong Ma, Meng Zhang, Lin Wu, Nan Wang, Chao Guo, Xiaoping Ma, Zhiyong Zhang, 2024, Exhumation and preservation of the Baixintan magmatic Ni-Cu sulphide deposit: Insights from (U-Th)/He and fission track thermochronology: Ore Geology Reviews.

Supplementary Material

Analytical procedures

Zircon and Apatite U-Pb analysis

U-Pb analyses of zircon and apatite were performed at Beijing Quick-Thermo Science & Technology Co., Ltd. utilizing an Agilent 8900 ICP-QQQ coupled to an ESI New Wave NWR ^{193}U laser ablation system. Individual zircon and apatite crystals were randomly selected, embedded in epoxy resin, and polished to expose their internal surfaces. For zircon U-Pb analysis, Cathodoluminescence (CL) images of zircons were taken to explore internal structures and pinpoint potential target sites for U-Pb dating, utilizing a laser spot diameter of 20 μm . Harvard 91500 zircon (Wiedenbeck et al., 1995) was the primary reference material for U-Pb age geochronology, with Plešovice zircon (Sláma et al., 2008) serving as the secondary reference material. For apatite U-Pb analysis, reference materials and unknown crystals were ablated for 25 seconds using a 30 μm beam diameter, $\sim 3 \text{ J/cm}^2$ fluence, and a 5 Hz repetition rate. Madagascar apatite (Thomson et al., 2012) was utilized as the primary reference material, while McClure Mountain apatite (Schoene and Bowring, 2006; $523.51 \pm 1.53 \text{ Ma}$) served as the secondary age reference material. Zircon and apatite U-Pb data were processed with Iolite data reduction software (Paton et al., 2010), following the procedure described in Chew et al. (2014) and Xiang et al (2021). IsoplotR was employed to produce Concordia diagrams (Vermeesch, 2018).

Apatite fission track analysis

Apatite fission track (AFT) analysis was also carried out at Beijing Quick-Thermo Science & Technology Co., Ltd. The apatite crystals were embedded in epoxy resin on glass slides and polished to expose their internal surfaces. They

were then etched in a 5 M HNO₃ solution at 20 °C for 20 seconds to reveal ²³⁸U spontaneous fission tracks. After etching, apatite crystals were imaged with an Autoscan fission track analysis system based on a Zeiss Axio Imager M2m microscope. The measurements of fission track density, D_{par} values, and fission-track lengths were conducted using the Trackwork and Fasttrack systems (Gleadow et al., 2009). The U concentrations of each counted apatite crystal and reference materials (primary standard = NIST SRM 612 glass; secondary standard = Madagascar apatite) were measured during the apatite U-Pb dating procedure, using ⁴³Ca as an internal elemental standard. Single crystal AFT ages were calculated using an absolute calibration with an aggregate constant (ξ) of 2.001×10^3 (Hasebe et al., 2004). Central ages and their dispersion for each sample were computed and plotted using RadialPlotter (Vermeesch, 2009).

Zircon (U-Th)/He Analyses

Zircon (U-Th)/He analysis was conducted at the Institute of Geology, China Earthquake Administration. Using a binocular microscope, inclusion-free, euhedral, unfractured crystals with sizes of >70 μm were selected. The crystals underwent digital measurements to calculate α -ejection corrections (FT; Farley et al., 1996). Zircon grains were loaded into niobium vials and outgassed under vacuum at >1000 °C for 10 min, then reheated until more than 99% of the He was extracted from the crystals. The ⁴He was spiked with ³He and analyzed using a Quadrupole PrismaPlus QMG 220. The degassed zircon crystals were dissolved in HF-HNO₃ before the measurement of U and Th contents. U and Th concentrations were measured using an Agilent 7900 ICP-MS. Raw ages were calculated from measured contents of U, Th and He in zircon, with five crystals analyzed per sample for reproducibility. Corrected ages incorporated α -ejection corrections (Farley et al., 1996), following detailed procedures outlined in Li et al. (2017).

Inverse Thermal History Modeling

Inverse modeling in QTQt employs a Bayesian Markov Chain - Monte Carlo approach, allowing users to input thermochronometric data and define temperature-time (t-T) constraints. The model outputs a population of plausible

thermal histories, determined by the posterior probability (Gallagher, 2012). The model inputs in this study include single-grain zircon (U–Th)/He and AFT ages, confined track lengths (CTLs), and Dpar values (fission-track etch pit diameter parallel to the c-axis). In QTQt inverse modeling, we set the present temperature and geothermal gradient to 10 ± 10 °C and 30 ± 10 °C/km, respectively. Additionally, the Zircon U–Pb age for sample BXT16 and the corresponding Apatite U–Pb ages for the other samples were used as initial time-temperature (T–t) constraints in the inverse modeling process. Detailed modeling parameters for each sample are provided in Table S1.

Table S1 Inverse Modeling parameters for the Baixintan deposit

Samples	ZHe age span (Ma)	AFT data		Time-temperature constraints
		Age span (Ma)	CTLs span (μm)	
Northeastern Baixintan				
BXT09	—	455–165	15.8–8.7	500 ± 50 °C and 288 ± 14 Ma
BXT10	—	432–175	15.4–8.5	500 ± 50 °C and 268 ± 16 Ma
BXT16	—	433–165	14.9–6.6	900 ± 100 °C and 285 ± 3 Ma
Southwestern Baixintan				
BX03	218–154	298–65	—	500 ± 50 °C and 288 ± 14 Ma
BX04	267–210	340–67	—	500 ± 50 °C and 287 ± 13 Ma

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Supplementary Material Table S2. Single grain zircon U-Pb data from the Baixintan deposit.

Analysis	Th (μg/g)	U (μg/g)	Th/U	Isotope ratios						Apparent ages (Ma)						
				$^{207}\text{Pb}/^{206}\text{Pb}$	1σ	$^{207}\text{Pb}/^{235}\text{U}$	1σ	$^{206}\text{Pb}/^{238}\text{U}$	1σ	$^{207}\text{Pb}/^{206}\text{Pb}$	1σ	$^{207}\text{Pb}/^{235}\text{U}$	1σ	$^{206}\text{Pb}/^{238}\text{U}$	1σ	Concordance
BXT10-1	1781	818	2.2	0.0530	0.0012	0.3145	0.0076	0.0436	0.0006	327.8	58.3	277.7	5.9	275.2	4.0	99%
BXT10-2	1576	731	2.2	0.0588	0.0017	0.3733	0.0116	0.0463	0.0007	561.1	61.1	322.1	8.6	291.8	4.5	90%
BXT10-3	1571	851	1.9	0.0561	0.0013	0.3408	0.0079	0.0445	0.0007	457.5	50.0	297.8	6.0	280.8	4.6	94%
BXT10-4	1395	680	2.1	0.0516	0.0012	0.3162	0.0084	0.0444	0.0007	264.9	51.8	278.9	6.5	280.0	4.1	99%
BXT10-5	1152	530	2.2	0.0545	0.0013	0.3269	0.0087	0.0437	0.0008	390.8	49.1	287.2	6.6	275.8	4.8	95%
BXT10-6	190	320	0.6	0.0546	0.0017	0.3300	0.0140	0.0437	0.0014	394.5	70.4	289.6	10.7	275.6	8.8	95%
BXT10-7	422	234	0.5	0.1491	0.0107	6.4466	0.5583	0.3097	0.0166	2334.9	123.5	2038.6	76.1	1739.1	81.7	84%
BXT10-8	370	817	0.5	0.0587	0.0014	0.4192	0.0117	0.0515	0.0010	566.7	53.7	355.5	8.4	323.7	6.4	90%
BXT10-9	613	378	1.6	0.0720	0.0027	0.4263	0.0169	0.0419	0.0007	987.0	77.3	360.5	12.0	264.5	4.2	69%
BXT10-10	695	399	1.7	0.0510	0.0017	0.3098	0.0078	0.0437	0.0008	242.7	75.9	274.0	6.1	275.6	4.7	99%
BXT10-11	825	518	1.6	0.0516	0.0012	0.3111	0.0078	0.0435	0.0007	333.4	53.7	275.0	6.0	274.5	4.0	99%
BXT10-12	723	399	1.8	0.0559	0.0017	0.3766	0.0120	0.0484	0.0008	450.0	66.7	324.5	8.9	305.0	4.6	93%
BXT10-13	435	292	1.5	0.0646	0.0024	0.5203	0.0220	0.0575	0.0016	761.1	79.6	425.3	14.7	360.5	9.8	83%
BXT10-14	85	181	0.5	0.0575	0.0025	0.3344	0.0163	0.0414	0.0009	509.3	99.1	292.9	12.4	261.6	5.4	88%
BXT10-15	1091	485	2.3	0.0543	0.0014	0.3485	0.0093	0.0466	0.0008	383.4	59.3	303.6	7.0	293.4	5.2	96%
BXT10-16	856	493	1.7	0.0558	0.0015	0.3604	0.0100	0.0467	0.0008	442.6	56.5	312.5	7.5	294.5	5.0	94%
BXT10-17	1525	636	2.4	0.0527	0.0013	0.3355	0.0079	0.0462	0.0007	316.7	55.6	293.8	6.0	291.1	4.5	99%
BXT10-18	851	372	2.3	0.0506	0.0015	0.3343	0.0090	0.0479	0.0009	220.4	75.0	292.8	6.8	301.7	5.5	97%

Supplementary Material Table S3. Single grain apatite U-Pb data from the Baixintan deposit.

Analysis	U (μg/g)	Th (μg/g)	Isotopic ratios								Age (Ma)	
			²⁰⁷ Pb / ₂₃₅ U	±2σ	²⁰⁶ Pb / ₂₃₈ U	±2σ	²³⁸ U / ₂₀₆ Pb	±2σ	²⁰⁷ Pb / ₂₀₆ Pb	±2σ	²⁰⁷ Pb- Cor.	±2σ
BX03												
BX03#01	8.90	36.10	5.85	0.68	0.090	0.006	11.05	0.64	0.449	0.039	280.9	34.4
BX03#02	6.67	31.40	7.12	0.49	0.109	0.007	9.56	0.64	0.485	0.041	307.7	42.4
BX03#03	7.61	31.10	7.50	0.68	0.104	0.007	9.98	0.62	0.517	0.041	267.8	40.0
BX03#04	10.70	49.30	7.73	0.63	0.109	0.006	9.46	0.54	0.515	0.034	281.7	36.2
BX03#05	6.39	30.80	9.49	0.66	0.132	0.007	7.87	0.44	0.527	0.035	328.6	44.0
BX03#06	4.49	22.80	17.00	1.40	0.183	0.013	5.67	0.41	0.645	0.042	283.3	70.4
BX03#07	7.36	33.20	6.20	0.41	0.097	0.005	10.49	0.55	0.473	0.033	283.4	31.4
BX03#08	6.10	30.70	6.27	0.59	0.100	0.007	10.59	0.78	0.479	0.049	288.8	45.6
BX03#09	6.86	29.60	7.96	0.56	0.116	0.007	8.91	0.53	0.498	0.039	316.7	42.8
BX03#10	7.29	33.40	7.20	1.20	0.107	0.015	10.40	1.20	0.498	0.049	291.7	59.3
BX03#11	6.99	32.70	7.94	0.59	0.110	0.007	9.20	0.51	0.521	0.044	279.5	44.5
BX03#12	7.15	44.20	11.82	0.86	0.149	0.009	6.90	0.47	0.571	0.037	318.6	51.6
BX03#13	9.77	53.20	5.09	0.51	0.087	0.007	11.83	0.95	0.423	0.034	290.9	32.9
BX03#14	9.40	39.80	5.91	0.50	0.100	0.006	10.40	0.60	0.445	0.037	314.5	36.8
BX03#15	7.80	33.70	4.16	0.33	0.082	0.005	12.78	0.71	0.379	0.032	300.2	28.2
BX03#16	7.40	28.30	8.15	0.56	0.113	0.005	8.93	0.43	0.525	0.039	284.7	39.9
BX03#17	6.33	31.80	13.06	0.81	0.157	0.009	6.56	0.37	0.613	0.038	283.7	55.5
BX03#18	6.43	28.50	9.83	0.68	0.131	0.006	7.84	0.43	0.549	0.043	303.2	49.9
BX03#19	14.80	0.44	7.97	0.40	0.355	0.017	2.90	0.14	0.164	0.008	1838.3	91.2
BX03#20	7.69	39.60	9.42	0.73	0.125	0.007	8.18	0.45	0.547	0.036	292.1	42.5
BX03#21	8.16	46.50	5.38	0.39	0.091	0.006	11.51	0.72	0.445	0.036	285.6	34.0
BX03#22	7.29	37.80	9.40	0.62	0.125	0.006	8.09	0.39	0.534	0.030	304.3	36.8
BX03#23	8.37	44.40	5.97	0.55	0.094	0.007	11.00	0.83	0.464	0.041	282.9	38.1
BX03#24	7.91	53.50	7.57	0.47	0.112	0.005	9.21	0.43	0.495	0.029	307.3	32.4
BX03#25	8.80	40.00	4.60	0.31	0.086	0.005	12.02	0.69	0.395	0.028	304.6	26.6
BX03#26	9.00	48.80	8.62	0.45	0.122	0.007	8.49	0.43	0.518	0.030	312.0	36.7
BX03#27	6.92	29.60	6.06	0.40	0.099	0.007	10.71	0.68	0.452	0.025	305.0	29.8
BX03#28	6.18	38.00	9.49	0.67	0.128	0.007	8.08	0.40	0.544	0.037	300.7	43.8
BX03#29	8.26	50.00	10.23	0.54	0.136	0.007	7.58	0.37	0.550	0.030	314.4	40.0
BX03#30	6.46	44.60	12.24	0.91	0.152	0.010	6.81	0.44	0.581	0.038	313.3	54.4
BX03#31	7.30	30.60	80.50	9.30	0.719	0.075	1.56	0.21	0.804	0.040	197.0	273.9
BX03#32	10.70	55.30	7.90	0.57	0.112	0.006	9.25	0.50	0.512	0.031	293.3	34.3
BX03#33	5.03	21.30	7.81	0.70	0.117	0.010	9.06	0.94	0.501	0.044	315.8	50.6
BX03#34	6.59	27.60	5.98	0.42	0.098	0.007	10.61	0.75	0.461	0.038	297.1	38.4
BX03#35	6.11	28.30	7.68	0.53	0.111	0.007	9.52	0.61	0.518	0.036	284.9	38.5
BX03#36	11.40	127.00	9.24	0.39	0.125	0.004	8.12	0.26	0.536	0.021	302.3	28.1
BX03#37	8.80	40.00	7.65	0.42	0.106	0.006	9.52	0.54	0.521	0.036	269.7	36.6
BX03#38	8.70	42.30	6.12	0.56	0.099	0.005	10.44	0.61	0.447	0.035	310.1	33.6

BX03#39	10.90	52.60	4.38	0.31	0.082	0.006	12.51	0.92	0.396	0.033	291.7	31.2
BX03#40	6.96	37.00	18.28	0.83	0.201	0.009	5.10	0.23	0.666	0.034	277.8	64.8
BX03#41	8.17	34.40	5.96	0.69	0.097	0.006	10.71	0.70	0.440	0.042	307.7	38.7

BX04

BX04#01	8.85	75.20	10.31	0.61	0.131	0.005	7.75	0.33	0.571	0.034	288.9	40.7
BX04#02	8.71	57.60	4.23	0.58	0.081	0.007	12.90	1.20	0.417	0.070	277.8	50.9
BX04#03	6.39	30.10	10.44	0.72	0.132	0.011	7.98	0.74	0.593	0.059	269.0	67.3
BX04#04	7.12	35.10	6.16	0.49	0.099	0.005	10.50	0.53	0.463	0.035	301.9	32.7
BX04#05	7.80	43.60	9.21	0.80	0.132	0.015	8.27	0.86	0.562	0.051	300.8	64.7
BX04#07	7.66	35.70	7.30	1.20	0.098	0.009	10.71	0.90	0.486	0.048	281.7	46.3
BX04#09	7.20	31.30	6.84	0.83	0.102	0.008	10.23	0.70	0.488	0.037	291.5	39.3
BX04#10	7.91	51.90	13.50	1.30	0.158	0.013	6.42	0.48	0.614	0.045	295.3	64.6
BX04#11	6.01	22.30	8.50	1.80	0.123	0.015	8.68	0.78	0.497	0.045	342.6	61.1
BX04#12	7.80	35.80	8.61	0.64	0.119	0.010	8.88	0.71	0.534	0.034	296.7	42.1
BX04#13	7.02	36.20	10.69	0.92	0.142	0.010	7.42	0.50	0.566	0.048	318.8	60.4
BX04#14	7.53	32.80	15.93	0.81	0.181	0.009	5.68	0.29	0.645	0.035	294.6	58.6
BX04#15	24.20	22.90	1.54	0.16	0.059	0.004	17.30	1.10	0.191	0.020	305.9	20.7
BX04#16	6.97	32.80	7.09	0.51	0.109	0.008	9.74	0.74	0.494	0.040	305.3	41.6
BX04#17	8.62	38.90	5.00	0.44	0.089	0.007	11.62	0.93	0.414	0.042	307.6	37.9
BX04#20	5.89	26.00	8.65	0.91	0.116	0.008	9.02	0.64	0.531	0.048	293.3	49.4
BX04#21	6.12	31.60	8.97	0.73	0.123	0.007	8.53	0.55	0.526	0.036	315.5	41.7
BX04#22	8.31	36.30	8.68	0.71	0.124	0.008	8.42	0.52	0.525	0.040	317.4	46.1
BX04#23	5.87	30.10	10.53	0.93	0.133	0.009	7.86	0.56	0.566	0.034	297.8	44.3
BX04#24	8.16	46.90	9.88	0.68	0.130	0.008	8.01	0.45	0.569	0.049	288.1	55.1
BX04#25	5.53	33.10	9.77	0.65	0.129	0.009	8.21	0.52	0.568	0.043	287.6	50.4
BX04#26	5.02	20.60	11.32	0.97	0.145	0.010	7.17	0.53	0.578	0.050	311.1	63.1
BX04#27	7.15	37.40	8.87	0.78	0.121	0.009	8.64	0.57	0.535	0.038	301.7	44.1
BX04#28	6.68	29.10	4.96	0.56	0.089	0.007	12.10	0.94	0.427	0.043	298.2	38.5
BX04#29	7.86	38.10	5.37	0.42	0.089	0.005	11.71	0.70	0.455	0.035	277.9	30.9
BX04#30	8.71	39.30	3.38	0.33	0.074	0.005	13.65	0.79	0.336	0.036	301.7	28.3
BX04#31	5.03	20.90	10.20	1.20	0.129	0.009	7.92	0.59	0.577	0.066	279.4	71.5
BX04#32	9.29	50.90	5.57	0.67	0.090	0.008	11.53	0.94	0.453	0.042	282.4	39.6
BX04#33	7.40	34.80	5.55	0.35	0.091	0.005	11.30	0.59	0.453	0.034	286.1	30.2
BX04#34	8.90	39.30	4.22	0.28	0.083	0.006	12.60	0.95	0.382	0.033	306.1	31.8
BX04#35	6.23	39.60	14.60	1.10	0.167	0.010	6.02	0.40	0.648	0.059	267.7	82.6
BX04#36	8.52	40.60	4.39	0.40	0.083	0.006	12.70	1.10	0.396	0.045	297.8	37.6
BX04#37	6.61	37.10	7.18	0.60	0.105	0.009	10.11	0.79	0.511	0.041	281.5	42.6
BX04#38	9.60	27.40	7.00	1.10	0.100	0.010	10.50	1.20	0.482	0.050	291.1	49.6
BX04#39	10.80	62.80	9.52	0.81	0.124	0.013	8.40	1.10	0.562	0.036	282.8	48.4
BX04#40	6.67	30.90	8.20	1.10	0.111	0.013	9.60	1.20	0.517	0.049	292.4	55.8
BX04#42	4.77	20.70	15.10	1.10	0.179	0.015	5.83	0.46	0.631	0.057	310.4	87.6
BX04#43	7.44	38.80	10.14	0.66	0.132	0.007	7.66	0.39	0.561	0.039	302.5	46.3
BX04#44	7.90	42.40	4.62	0.32	0.082	0.005	12.35	0.70	0.406	0.028	288.2	26.0
BX04#45	8.82	39.60	5.89	0.40	0.094	0.006	10.96	0.64	0.455	0.030	294.2	29.8

BX04#46	6.24	31.90	8.34	0.91	0.112	0.009	9.07	0.73	0.528	0.051	286.2	51.7
BX04#47	9.90	44.20	3.96	0.46	0.079	0.006	13.30	1.00	0.365	0.034	302.7	30.9
BX04#48	7.72	34.60	5.71	0.44	0.093	0.006	11.26	0.72	0.457	0.038	287.9	33.6
BX04#49	7.85	33.10	9.48	0.66	0.126	0.007	8.21	0.47	0.537	0.032	310.8	38.7
BX04#50	5.18	27.90	12.06	0.82	0.150	0.009	6.95	0.42	0.581	0.039	318.6	53.4
BX04#51	6.22	40.10	11.19	0.71	0.140	0.008	7.40	0.42	0.572	0.039	307.7	49.6
BX04#52	5.91	28.00	6.04	0.73	0.095	0.009	11.02	0.91	0.461	0.050	291.3	46.8
BX04#53	4.28	19.50	9.04	0.70	0.126	0.007	8.06	0.41	0.533	0.046	315.7	50.6

BXT09

BXT09#01	2.98	8.40	54.40	2.80	0.519	0.028	1.96	0.11	0.763	0.037	351.6	157.1
BXT09#02	11.51	23.60	13.60	1.10	0.164	0.010	6.20	0.41	0.597	0.028	326.2	42.3
BXT09#03	1.51	5.40	111.00	10.00	1.050	0.110	1.04	0.10	0.810	0.059	322.6	493.2
BXT09#04	5.42	12.70	29.10	1.60	0.300	0.016	3.42	0.20	0.709	0.026	331.3	67.8
BXT09#05	9.15	20.20	19.90	2.30	0.217	0.021	4.86	0.37	0.664	0.038	316.9	72.9
BXT09#06	10.30	27.30	16.70	1.10	0.195	0.013	5.40	0.34	0.633	0.028	332.3	49.8
BXT09#07	1.67	3.88	88.50	7.10	0.805	0.065	1.30	0.12	0.812	0.062	235.6	399.4
BXT09#08	2.73	7.20	39.70	2.90	0.381	0.024	2.73	0.16	0.756	0.042	280.1	130.6
BXT09#09	5.84	14.50	30.50	2.10	0.312	0.018	3.36	0.20	0.723	0.033	310.4	86.2
BXT09#10	6.31	17.80	29.00	2.10	0.293	0.018	3.55	0.21	0.719	0.031	300.9	77.2
BXT09#11	1.82	4.90	88.00	11.00	0.772	0.077	1.37	0.16	0.795	0.057	328.5	351.0
BXT09#12	7.68	20.40	15.00	1.30	0.174	0.013	5.88	0.39	0.628	0.043	303.8	63.7
BXT09#13	3.75	10.40	32.20	2.80	0.322	0.026	3.32	0.25	0.738	0.048	282.6	125.9
BXT09#14	1.61	5.60	70.00	8.10	0.641	0.056	1.64	0.14	0.768	0.054	407.8	275.5
BXT09#15	7.62	21.40	22.70	3.20	0.230	0.016	4.38	0.30	0.709	0.079	255.0	144.5
BXT09#16	1.84	5.50	76.10	4.60	0.695	0.040	1.46	0.08	0.788	0.028	334.1	165.5
BXT09#17	4.44	13.00	27.40	1.20	0.272	0.013	3.78	0.17	0.722	0.026	273.2	61.3
BXT09#18	1.64	4.90	39.80	2.50	0.386	0.027	2.63	0.18	0.763	0.046	262.6	144.3
BXT09#19	3.38	9.80	29.70	3.60	0.294	0.022	3.51	0.25	0.741	0.045	251.4	108.3
BXT09#20	4.02	12.40	41.60	2.60	0.401	0.022	2.58	0.14	0.752	0.029	307.1	98.7
BXT09#21	2.04	6.30	86.50	6.10	0.774	0.046	1.32	0.09	0.799	0.034	305.3	218.4
BXT09#22	2.12	7.50	51.70	3.30	0.487	0.022	2.08	0.10	0.763	0.043	330.2	169.1
BXT09#23	1.50	5.00	55.70	4.10	0.523	0.043	2.02	0.18	0.770	0.052	325.8	218.3
BXT09#24	1.68	4.30	41.70	3.60	0.406	0.026	2.53	0.17	0.746	0.064	329.8	206.1
BXT09#25	4.27	10.50	32.60	2.00	0.322	0.018	3.20	0.19	0.729	0.039	305.2	103.0
BXT09#26	1.80	5.30	71.70	5.50	0.668	0.060	1.56	0.13	0.806	0.045	227.4	245.3
BXT09#27	8.35	20.70	17.20	1.20	0.194	0.012	5.20	0.31	0.659	0.036	291.4	59.2
BXT09#28	1.39	3.70	59.70	6.40	0.563	0.048	1.89	0.16	0.776	0.069	324.1	307.6
BXT09#29	7.07	17.20	19.40	1.20	0.205	0.013	5.05	0.30	0.679	0.036	275.7	62.3
BXT09#30	8.80	21.80	14.43	0.85	0.168	0.007	6.09	0.25	0.625	0.034	297.6	47.7
BXT09#31	1.93	5.90	48.30	3.80	0.460	0.047	2.32	0.21	0.759	0.076	326.5	276.8
BXT09#32	1.72	5.20	38.90	3.50	0.373	0.027	2.82	0.19	0.786	0.058	186.5	174.5
BXT09#33	10.76	30.60	12.46	0.73	0.151	0.007	6.75	0.30	0.601	0.032	295.0	41.0
BXT09#34	1.94	4.84	29.60	2.80	0.293	0.022	3.63	0.31	0.755	0.074	218.4	173.0
BXT09#35	1.68	4.40	46.80	7.90	0.416	0.045	2.47	0.28	0.756	0.056	305.5	188.0

BXT09#36	5.10	14.10	18.60	1.50	0.199	0.011	5.07	0.29	0.668	0.042	284.8	68.8
BXT09#37	1.59	4.89	60.40	6.20	0.581	0.068	1.84	0.17	0.764	0.037	388.3	179.8
BXT09#38	1.53	4.17	80.50	7.20	0.743	0.067	1.43	0.11	0.795	0.044	316.4	265.3
BXT09#39	2.21	5.40	68.60	4.30	0.622	0.029	1.62	0.09	0.786	0.038	309.2	193.4
BXT09#40	2.27	7.60	36.10	2.70	0.357	0.026	2.91	0.19	0.740	0.041	307.3	120.2
BXT09#41	5.17	17.80	25.90	1.20	0.271	0.015	3.77	0.20	0.692	0.027	335.6	63.6
BXT09#42	8.58	23.50	15.56	0.97	0.178	0.009	5.78	0.28	0.638	0.037	297.2	55.0
BXT09#43	2.22	6.50	64.20	5.50	0.589	0.047	1.79	0.16	0.790	0.043	274.6	206.5
BXT09#44	1.72	4.30	66.70	5.50	0.621	0.052	1.72	0.12	0.778	0.042	347.3	212.1
BXT09#45	1.75	5.50	66.60	4.10	0.600	0.032	1.69	0.10	0.798	0.040	242.1	196.9

BXT10

BXT10#01	6.09	19.70	9.20	0.67	0.125	0.008	8.39	0.52	0.563	0.039	278.7	45.1
BXT10#02	3.85	11.60	12.91	0.88	0.158	0.009	6.58	0.37	0.615	0.047	285.3	64.0
BXT10#03	3.11	8.50	16.20	1.70	0.182	0.014	5.64	0.39	0.640	0.047	292.2	75.0
BXT10#04	3.23	8.70	16.90	1.50	0.187	0.015	5.70	0.46	0.657	0.043	275.1	71.9
BXT10#05	6.83	20.30	8.58	0.51	0.116	0.006	8.83	0.44	0.553	0.031	266.3	34.2
BXT10#06	3.18	9.30	24.30	2.80	0.243	0.022	4.25	0.38	0.714	0.056	247.1	116.0
BXT10#07	6.57	22.70	9.17	0.83	0.121	0.008	8.65	0.53	0.547	0.038	283.8	42.8
BXT10#08	3.79	12.80	11.02	0.98	0.138	0.010	7.44	0.55	0.582	0.042	285.6	52.8
BXT10#09	5.97	21.70	10.77	0.91	0.138	0.010	7.52	0.49	0.581	0.039	286.5	49.5
BXT10#10	7.75	26.90	7.41	0.57	0.101	0.005	10.03	0.47	0.524	0.034	256.5	31.5
BXT10#11	3.78	11.10	12.90	1.70	0.153	0.012	6.91	0.51	0.604	0.045	289.7	61.8
BXT10#12	3.16	9.50	16.90	1.40	0.202	0.018	5.24	0.43	0.643	0.041	319.1	75.9
BXT10#13	3.80	11.00	9.90	1.00	0.127	0.011	8.50	0.70	0.570	0.042	275.2	50.5
BXT10#14	2.65	8.20	17.90	2.20	0.197	0.021	5.60	0.59	0.661	0.050	283.4	87.6
BXT10#15	4.88	14.90	11.53	0.88	0.144	0.008	7.10	0.40	0.595	0.037	282.5	47.9
BXT10#16	3.57	10.00	16.80	2.80	0.193	0.022	5.47	0.70	0.625	0.065	332.4	108.2
BXT10#17	2.47	7.90	24.90	3.70	0.258	0.030	4.39	0.49	0.687	0.047	317.0	108.6
BXT10#18	3.28	10.30	18.90	2.80	0.210	0.023	5.26	0.52	0.653	0.054	315.0	99.7
BXT10#19	42.80	137.00	3.22	0.30	0.069	0.004	14.81	0.88	0.338	0.022	276.3	21.3
BXT10#20	5.68	17.40	10.52	0.70	0.132	0.007	7.68	0.38	0.583	0.043	272.3	49.7
BXT10#21	5.03	12.60	13.80	2.50	0.165	0.022	6.93	0.65	0.593	0.041	326.3	71.2
BXT10#22	7.50	25.60	9.70	1.10	0.128	0.010	8.13	0.54	0.543	0.028	304.5	38.7
BXT10#23	5.17	14.90	9.54	0.64	0.124	0.007	8.35	0.51	0.567	0.043	271.7	46.7
BXT10#24	3.60	11.80	13.40	1.20	0.159	0.012	6.56	0.45	0.613	0.038	289.6	56.1
BXT10#25	8.34	28.80	6.62	0.51	0.096	0.005	10.58	0.54	0.492	0.024	267.4	24.5
BXT10#26	4.09	16.40	32.10	4.10	0.306	0.033	3.53	0.38	0.733	0.037	264.4	105.3
BXT10#27	9.67	36.90	8.00	1.10	0.106	0.009	9.70	0.67	0.520	0.031	273.1	36.6
BXT10#28	3.65	10.80	11.90	1.10	0.141	0.010	7.38	0.54	0.616	0.050	253.9	61.3
BXT10#29	4.47	15.00	11.17	0.95	0.142	0.010	7.36	0.50	0.581	0.056	294.9	68.1
BXT10#30	2.98	9.30	12.40	1.40	0.150	0.014	7.09	0.60	0.617	0.067	268.7	85.3
BXT10#32	7.35	24.10	8.29	0.67	0.113	0.007	9.09	0.64	0.537	0.037	275.4	39.3
BXT10#33	3.41	12.20	20.50	2.10	0.232	0.020	4.68	0.35	0.673	0.052	311.1	103.8
BXT10#34	3.02	8.70	15.60	1.50	0.180	0.015	5.90	0.48	0.638	0.048	291.9	76.1

BXT10#35	3.39	9.70	18.70	1.90	0.198	0.020	5.36	0.50	0.693	0.045	234.8	79.9
BXT10#36	3.13	11.00	22.80	4.70	0.238	0.041	4.58	0.66	0.692	0.059	283.4	125.7
BXT10#37	6.18	21.20	17.70	3.60	0.195	0.031	6.03	0.60	0.637	0.039	317.4	82.0
BXT10#38	5.14	17.80	14.00	1.70	0.164	0.015	6.50	0.50	0.647	0.048	254.6	70.0
BXT10#39	3.64	12.20	19.80	1.60	0.213	0.017	5.04	0.38	0.680	0.036	274.2	71.2
BXT10#40	3.33	10.20	14.80	1.30	0.169	0.011	6.15	0.40	0.639	0.051	273.0	73.8
BXT10#41	3.21	9.90	17.00	2.10	0.178	0.011	5.60	0.36	0.678	0.074	232.5	108.4
BXT10#42	3.41	10.50	14.90	1.90	0.174	0.016	6.27	0.52	0.622	0.040	304.2	65.4
BXT10#43	5.39	19.70	10.27	0.74	0.131	0.010	8.00	0.61	0.579	0.034	273.6	43.3
BXT10#44	3.90	12.20	12.30	1.30	0.149	0.011	7.03	0.53	0.604	0.048	282.2	62.9

BXT16

BXT16#01	8.86	26.10	19.10	1.50	0.210	0.016	4.89	0.36	0.672	0.035	307.2	64.1
BXT16#02	3.82	5.80	28.60	1.40	0.296	0.014	3.43	0.15	0.702	0.037	362.8	90.2
BXT16#03	3.27	10.70	12.30	1.40	0.160	0.015	6.72	0.61	0.576	0.046	353.1	66.2
BXT16#04	11.64	28.50	6.29	0.67	0.100	0.006	10.10	0.62	0.451	0.029	319.4	29.2
BXT16#05	14.20	41.90	7.20	0.36	0.109	0.004	9.27	0.34	0.478	0.025	325.3	25.2
BXT16#06	6.90	20.20	20.00	1.10	0.222	0.010	4.54	0.17	0.655	0.035	353.1	64.5
BXT16#07	11.62	32.30	6.16	0.59	0.101	0.006	10.13	0.64	0.438	0.033	332.6	32.5
BXT16#08	11.56	33.00	4.88	0.31	0.089	0.003	11.39	0.40	0.399	0.026	319.1	21.5
BXT16#09	6.43	18.40	10.53	0.71	0.134	0.008	7.53	0.42	0.563	0.039	310.4	45.0
BXT16#10	10.80	23.30	10.11	0.56	0.135	0.006	7.41	0.36	0.548	0.023	328.2	29.2
BXT16#11	9.61	26.20	7.69	0.45	0.117	0.007	8.80	0.49	0.497	0.031	329.9	34.8
BXT16#12	8.21	19.30	29.50	1.20	0.297	0.012	3.39	0.13	0.721	0.030	320.8	75.8
BXT16#13	4.56	12.00	27.20	1.50	0.270	0.015	3.82	0.21	0.732	0.040	269.2	89.1
BXT16#14	1.49	4.90	48.80	5.00	0.460	0.036	2.31	0.20	0.766	0.042	335.3	158.3
BXT16#15	4.69	10.10	40.40	2.40	0.392	0.026	2.60	0.16	0.760	0.052	304.5	163.4
BXT16#16	14.90	22.60	9.11	0.52	0.125	0.006	8.21	0.35	0.529	0.023	321.0	27.8
BXT16#17	4.53	12.60	9.61	0.87	0.137	0.012	7.88	0.59	0.537	0.050	344.0	61.1
BXT16#18	14.30	30.40	12.44	0.82	0.156	0.008	6.59	0.36	0.576	0.024	343.9	35.7
BXT16#19	11.09	15.30	11.59	0.82	0.144	0.006	7.06	0.28	0.582	0.035	311.2	42.4
BXT16#20	8.90	23.40	16.48	0.72	0.188	0.008	5.43	0.22	0.632	0.032	333.4	50.7
BXT16#21	13.45	30.70	11.30	0.51	0.142	0.007	7.11	0.32	0.578	0.025	311.1	32.8
BXT16#22	9.27	30.70	10.38	0.74	0.137	0.007	7.52	0.42	0.545	0.039	335.6	45.4
BXT16#23	13.13	27.00	8.29	0.44	0.121	0.007	8.61	0.48	0.509	0.028	329.4	32.5
BXT16#24	26.20	48.70	5.27	0.37	0.090	0.005	11.31	0.59	0.423	0.037	307.4	30.9
BXT16#25	9.44	24.20	6.98	0.47	0.107	0.005	9.43	0.46	0.471	0.029	323.4	29.2
BXT16#26	7.51	21.50	6.56	0.49	0.108	0.006	9.63	0.54	0.456	0.033	339.1	34.2
BXT16#27	9.02	29.10	6.39	0.40	0.107	0.007	9.85	0.66	0.445	0.029	346.3	33.0
BXT16#28	13.30	29.10	18.10	1.70	0.194	0.014	5.31	0.37	0.657	0.037	306.5	61.9
BXT16#29	6.61	11.40	21.20	1.70	0.229	0.017	4.40	0.29	0.672	0.042	334.6	80.6
BXT16#30	16.20	47.10	9.66	0.69	0.132	0.008	7.84	0.39	0.538	0.023	330.4	31.6
BXT16#31	11.80	23.40	9.00	0.46	0.125	0.005	8.04	0.33	0.529	0.026	322.8	29.9
BXT16#32	10.34	30.30	11.30	1.00	0.149	0.012	7.09	0.46	0.566	0.030	340.6	45.1
BXT16#33	8.35	32.70	7.74	0.64	0.116	0.006	8.85	0.44	0.495	0.033	328.9	35.1

BXT16#34	10.22	49.10	31.60	1.70	0.308	0.018	3.31	0.18	0.733	0.032	304.1	84.0
BXT16#35	9.30	16.90	21.40	2.80	0.231	0.025	5.17	0.67	0.649	0.035	378.1	76.5
BXT16#36	11.31	24.60	10.95	0.79	0.142	0.011	7.04	0.43	0.548	0.036	344.4	48.3
BXT16#37	9.08	18.80	26.50	2.10	0.266	0.016	3.87	0.24	0.706	0.030	318.4	69.3
BXT16#38	7.60	19.20	39.10	1.70	0.379	0.017	2.68	0.11	0.751	0.027	320.8	89.4
BXT16#39	6.12	14.40	19.00	1.70	0.214	0.015	4.92	0.33	0.659	0.042	334.3	75.2
BXT16#40	13.42	33.80	11.78	0.53	0.153	0.006	6.67	0.27	0.564	0.026	352.1	35.6
BXT16#41	6.60	27.00	11.24	0.95	0.148	0.014	7.22	0.62	0.574	0.048	329.3	63.6

Supplementary Material Table S4. Individual grain apatite fission track data from the Baixintan deposit

Analysis	N _s	Area (cm ²)	ρ _s (cm ⁻²)	²³⁸ U (μg/g)	1σ	D _{par} (μm)	Age (Ma)	1σ
BX03								
BX03#1	7	1.230E-05	5.693E+05	8.90	1.10	3.18	126.76	50.41
BX03#2	4	1.005E-05	3.980E+05	7.61	0.99	4.17	103.82	53.64
BX03#3	6	9.292E-06	6.457E+05	10.70	1.30	2.85	119.65	50.96
BX03#4	7	1.041E-05	6.726E+05	6.39	0.81	2.44	207.27	82.63
BX03#5	2	4.864E-06	4.112E+05	4.49	0.62	2.93	180.72	130.20
BX03#6	2	9.626E-06	2.078E+05	6.10	0.73	3.09	67.81	48.63
BX03#7	2	3.376E-06	5.924E+05	6.86	0.74	3.18	170.54	121.98
BX03#8	4	6.980E-06	5.731E+05	7.29	0.73	3.38	155.43	79.26
BX03#9	1	2.451E-06	4.079E+05	6.99	0.70	3.41	115.73	116.31
BX03#10	5	4.593E-06	1.089E+06	7.15	0.70	3.16	297.81	136.34
BX03#11	1	3.063E-06	3.265E+05	9.77	0.87	2.72	66.53	66.80
BX03#12	4	4.663E-06	8.578E+05	9.40	1.10	2.05	180.08	92.47
BX03#13	7	1.054E-05	6.644E+05	7.80	1.10	2.81	168.25	67.87
BX03#14	2	8.217E-06	2.434E+05	6.33	0.77	3.19	76.49	54.88
BX03#15	3	6.076E-06	4.937E+05	6.43	0.73	3.00	151.85	89.35
BX03#16	25	2.638E-05	9.478E+05	14.80	1.80	1.70	126.90	29.70
BX03#17	3	4.996E-06	6.004E+05	8.16	0.58	2.62	145.59	84.69
BX03#18	5	6.793E-06	7.361E+05	7.29	0.89	3.65	198.97	92.24
BX03#19	13	1.332E-05	9.759E+05	8.80	1.30	3.50	218.19	68.57
BX03#20	6	4.814E-06	1.246E+06	9.00	1.10	2.74	271.27	115.60
BX03#21	3	6.346E-06	4.728E+05	6.92	0.87	2.31	135.30	79.95
BX03#22	1	4.944E-06	2.022E+05	6.18	0.71	2.86	65.15	65.57
BX03#23	6	7.354E-06	8.159E+05	8.26	0.90	3.30	194.70	82.27
BX03#24	3	5.450E-06	5.505E+05	6.46	0.84	3.53	168.32	99.61
BX03#25	8	8.762E-06	9.131E+05	7.30	1.10	3.73	245.58	94.38
BX03#26	4	7.188E-06	5.565E+05	10.70	1.20	3.33	103.25	52.91
BX03#27	2	6.697E-06	2.987E+05	5.03	0.76	3.10	117.76	85.15
BX03#28	6	1.002E-05	5.988E+05	6.11	0.65	3.29	193.20	81.51
BX03#29	5	5.209E-06	9.599E+05	11.40	1.10	3.53	166.34	76.10
BX03#30	5	7.304E-06	6.845E+05	8.80	1.10	3.35	153.81	71.42
BX03#31	4	5.003E-06	7.995E+05	8.70	1.10	3.38	181.33	93.52
BX03#32	4	3.855E-06	1.037E+06	10.90	1.60	3.25	187.63	97.78
BX03#33	5	7.944E-06	6.294E+05	6.96	0.80	3.11	178.48	82.41
BX03#34	4	4.985E-06	8.025E+05	8.17	0.98	3.60	193.63	99.56
BX04								
BX04#1	5	7.109E-06	7.034E+05	4.44	2.84	5.45	309.49	241.55
BX04#2	4	1.292E-05	3.096E+05	2.58	1.37	2.35	235.78	171.97
BX04#3	3	7.966E-06	3.766E+05	3.70	2.64	5.84	200.54	184.06
BX04#4	3	5.859E-06	5.120E+05	3.09	1.77	4.33	323.34	262.97

BX04#5	2	4.935E-06	4.052E+05	3.03	1.58	3.26	262.21	230.38
BX04#6	2	3.731E-06	5.360E+05	4.65	3.28	3.20	226.64	226.37
BX04#7	2	7.670E-06	2.608E+05	2.42	1.19	1.75	212.14	182.71
BX04#8	2	5.081E-06	3.936E+05	3.08	1.86	2.41	250.80	233.21
BX04#9	2	9.896E-06	2.021E+05	3.61	2.18	3.66	111.07	103.28
BX04#10	3	4.179E-06	7.178E+05	5.02	3.46	2.83	279.98	251.73
BX04#11	7	8.651E-06	8.092E+05	5.61	1.31	2.27	282.38	125.46
BX04#12	2	5.393E-06	3.709E+05	2.75	1.58	4.06	264.41	240.90
BX04#13	1	3.414E-06	2.929E+05	3.73	2.09	3.66	155.26	177.97
BX04#14	1	4.194E-06	2.385E+05	2.91	1.82	2.79	161.96	191.03
BX04#15	2	4.995E-06	4.004E+05	4.08	2.65	3.12	193.46	185.75
BX04#16	1	4.664E-06	2.144E+05	2.30	1.21	3.48	183.90	207.79
BX04#17	3	7.173E-06	4.182E+05	2.40	0.91	3.27	339.61	234.57
BX04#18	5	9.032E-06	5.536E+05	3.83	2.69	4.59	282.96	235.60
BX04#19	3	1.278E-05	2.347E+05	7.00	3.30	2.60	66.75	49.75
BX04#20	2	4.925E-06	4.061E+05	4.82	3.19	4.43	166.44	161.20
BX04#21	1	5.068E-06	1.973E+05	2.51	1.52	2.93	155.42	181.69
BX04#22	1	3.267E-06	3.061E+05	3.52	2.20	2.66	171.72	202.50
BX04#23	3	1.214E-05	2.472E+05	3.09	1.47	4.01	158.14	118.30
BX04#24	3	6.955E-06	4.314E+05	3.10	2.06	4.33	272.64	240.01
BX04#25	1	6.268E-06	1.595E+05	2.72	1.12	3.89	116.29	125.77
BX04#26	2	7.127E-06	2.806E+05	2.65	1.38	4.26	208.49	183.09
BX04#27	3	6.663E-06	4.503E+05	3.43	2.03	3.13	257.51	212.91
BX04#28	4	9.694E-06	4.126E+05	3.08	1.97	3.68	262.66	213.24
BX04#29	1	4.931E-06	2.028E+05	1.96	1.15	3.98	203.81	236.30

BTX09

BTX09#1	22	6.221E-05	3.537E+05	2.98	0.26	3.75	233.25	53.73
BTX09#2	29	2.110E-05	1.375E+06	11.51	0.89	3.32	234.74	47.22
BTX09#3	9	1.443E-05	6.235E+05	5.42	0.50	3.22	226.20	78.23
BTX09#4	37	3.379E-05	1.095E+06	9.15	0.92	3.51	235.15	45.31
BTX09#5	21	2.045E-05	1.027E+06	10.30	1.20	3.52	196.51	48.61
BTX09#6	4	1.303E-05	3.071E+05	1.67	0.18	3.51	357.88	183.05
BTX09#7	7	1.824E-05	3.837E+05	2.73	0.24	3.50	275.30	106.83
BTX09#8	46	4.208E-05	1.093E+06	5.84	0.86	3.52	364.06	75.87
BTX09#9	13	1.185E-05	1.097E+06	6.31	0.43	3.73	338.85	96.77
BTX09#10	8	3.388E-05	2.361E+05	1.82	0.21	3.43	254.52	94.66
BTX09#11	15	2.192E-05	6.844E+05	3.75	0.30	3.37	355.26	96.03
BTX09#12	20	1.766E-05	1.133E+06	7.62	0.78	3.20	290.89	71.54
BTX09#13	6	1.494E-05	4.017E+05	1.84	0.10	3.71	422.95	174.13
BTX09#14	3	2.199E-05	1.364E+05	1.64	0.10	3.26	164.63	95.55
BTX09#15	6	1.526E-05	3.932E+05	3.38	0.21	3.17	228.70	94.44
BTX09#16	3	1.662E-05	1.805E+05	2.12	0.12	3.50	168.17	97.56
BTX09#17	6	2.297E-05	2.612E+05	1.50	0.13	2.99	339.38	141.64
BTX09#18	3	1.837E-05	1.633E+05	1.68	0.13	3.56	191.64	111.64

BTX09#19	13	2.052E-05	6.335E+05	4.27	0.42	3.29	290.27	85.42
BTX09#20	18	1.335E-05	1.348E+06	7.07	0.55	3.27	370.69	92.01
BTX09#21	7	2.031E-05	3.447E+05	1.72	0.15	3.76	389.07	150.92
BTX09#22	24	1.670E-05	1.437E+06	10.76	0.86	3.34	261.87	57.41
BTX09#23	5	1.942E-05	2.575E+05	1.94	0.16	3.73	260.30	118.37
BTX09#24	4	1.318E-05	3.034E+05	1.68	0.16	3.05	351.64	178.98
BTX09#25	14	2.051E-05	6.826E+05	5.10	0.38	3.37	262.43	72.81
BTX09#26	5	1.386E-05	3.608E+05	1.53	0.15	3.74	455.44	208.52
BTX09#27	14	2.617E-05	5.349E+05	2.27	0.18	3.40	455.11	126.87
BTX09#28	25	3.282E-05	7.617E+05	5.17	0.43	3.49	288.30	62.45
BTX09#29	22	2.365E-05	9.304E+05	8.58	0.54	3.58	213.43	47.45
BTX09#30	8	1.789E-05	4.471E+05	2.22	0.34	3.78	390.94	150.63
BTX09#31	5	1.747E-05	2.862E+05	1.72	0.15	3.18	324.68	147.93
BTX10								
BTX10#1	10	1.419E-05	7.046E+05	3.82	0.22	2.71	358.94	115.37
BTX10#2	18	3.113E-05	5.783E+05	3.27	0.18	3.20	344.54	83.39
BTX10#3	33	2.833E-05	1.165E+06	11.64	0.85	3.71	197.24	37.23
BTX10#4	47	2.900E-05	1.621E+06	14.20	0.68	3.74	224.49	34.47
BTX10#5	54	3.507E-05	1.540E+06	6.90	0.36	3.73	431.85	62.94
BTX10#6	22	1.530E-05	1.438E+06	11.62	0.56	3.70	243.01	53.12
BTX10#7	29	1.536E-05	1.887E+06	11.56	0.51	3.38	318.66	60.82
BTX10#8	23	2.870E-05	8.015E+05	6.43	0.46	3.51	244.74	53.95
BTX10#9	54	5.075E-05	1.064E+06	10.80	0.62	4.09	194.20	28.68
BTX10#10	20	1.285E-05	1.557E+06	8.21	0.33	3.10	368.77	83.78
BTX10#11	11	2.342E-05	4.696E+05	4.56	0.25	3.37	202.86	62.17
BTX10#12	13	2.383E-05	5.455E+05	4.69	0.39	2.36	228.66	66.21
BTX10#13	9	2.244E-05	4.011E+05	4.53	0.40	3.93	174.80	60.28
BTX10#14	25	1.114E-05	2.243E+06	14.30	1.50	3.83	306.49	69.22
BTX10#15	40	2.482E-05	1.611E+06	8.90	0.67	2.73	352.43	61.72
BTX10#16	18	1.176E-05	1.530E+06	13.45	0.98	2.69	223.72	55.19
BTX10#17	10	9.508E-06	1.052E+06	9.27	0.78	3.17	223.20	73.04
BTX10#18	40	2.603E-05	1.537E+06	13.13	0.90	3.28	230.11	39.65
BTX10#19	50	1.376E-05	3.635E+06	26.20	2.10	3.10	271.84	44.19
BTX10#20	23	1.367E-05	1.682E+06	9.44	0.77	3.46	347.06	77.71
BTX10#21	23	2.226E-05	1.033E+06	7.51	0.71	3.39	269.55	61.71
BTX10#22	35	3.021E-05	1.159E+06	9.02	0.75	3.40	252.14	47.50
BTX10#23	60	2.141E-05	2.802E+06	16.20	1.00	3.68	337.16	48.25
BTX10#24	70	3.761E-05	1.861E+06	11.80	0.72	3.18	308.13	41.35
BTX10#25	17	1.342E-05	1.266E+06	10.34	0.65	3.47	240.48	60.25
BTX10#26	14	1.038E-05	1.348E+06	8.35	0.44	3.58	315.23	85.87
BTX10#27	25	1.730E-05	1.445E+06	10.22	0.77	3.80	276.92	59.18
BTX10#28	19	1.423E-05	1.335E+06	9.30	1.90	3.24	281.05	86.34
BTX10#29	8	6.026E-06	1.328E+06	9.08	0.76	3.06	286.24	104.00
BTX10#30	23	1.768E-05	1.301E+06	7.60	0.63	2.89	333.78	74.90

BTX16

BTX16#1	10	1.419E-05	7.046E+05	3.82	0.22	2.71	358.94	115.37
BTX16#2	18	3.113E-05	5.783E+05	3.27	0.18	3.20	344.54	83.39
BTX16#3	33	2.833E-05	1.165E+06	11.64	0.85	3.71	197.24	37.23
BTX16#4	47	2.900E-05	1.621E+06	14.20	0.68	3.74	224.49	34.47
BTX16#5	54	3.507E-05	1.540E+06	6.90	0.36	3.73	431.85	62.94
BTX16#6	22	1.530E-05	1.438E+06	11.62	0.56	3.70	243.01	53.12
BTX16#7	29	1.536E-05	1.887E+06	11.56	0.51	3.38	318.66	60.82
BTX16#8	23	2.870E-05	8.015E+05	6.43	0.46	3.51	244.74	53.95
BTX16#9	54	5.075E-05	1.064E+06	10.80	0.62	4.09	194.20	28.68
BTX16#10	10	1.248E-05	8.011E+05	9.61	0.35	4.45	164.70	52.43
BTX16#11	20	1.285E-05	1.557E+06	8.21	0.33	3.10	368.77	83.78
BTX16#12	11	2.342E-05	4.696E+05	4.56	0.25	3.37	202.86	62.17
BTX16#13	13	2.383E-05	5.455E+05	4.69	0.39	2.36	228.66	66.21
BTX16#14	9	2.244E-05	4.011E+05	4.53	0.40	3.93	174.80	60.28
BTX16#15	25	1.114E-05	2.243E+06	14.30	1.50	3.83	306.49	69.22
BTX16#16	29	1.169E-05	2.481E+06	11.09	0.99	6.73	432.84	89.18
BTX16#17	40	2.482E-05	1.611E+06	8.90	0.67	2.73	352.43	61.72
BTX16#18	18	1.176E-05	1.530E+06	13.45	0.98	2.69	223.72	55.19
BTX16#19	10	9.508E-06	1.052E+06	9.27	0.78	3.17	223.20	73.04
BTX16#20	40	2.603E-05	1.537E+06	13.13	0.90	3.28	230.11	39.65
BTX16#21	50	1.376E-05	3.635E+06	26.20	2.10	3.10	271.84	44.19
BTX16#22	23	1.367E-05	1.682E+06	9.44	0.77	3.46	347.06	77.71
BTX16#23	23	2.226E-05	1.033E+06	7.51	0.71	3.39	269.55	61.71
BTX16#24	35	3.021E-05	1.159E+06	9.02	0.75	3.40	252.14	47.50
BTX16#25	60	2.141E-05	2.802E+06	16.20	1.00	3.68	337.16	48.25
BTX16#26	70	3.761E-05	1.861E+06	11.80	0.72	3.18	308.13	41.35
BTX16#27	17	1.342E-05	1.266E+06	10.34	0.65	3.47	240.48	60.25
BTX16#28	14	1.038E-05	1.348E+06	8.35	0.44	3.58	315.23	85.87
BTX16#29	25	1.730E-05	1.445E+06	10.22	0.77	3.80	276.92	59.18
BTX16#30	19	1.423E-05	1.335E+06	9.30	1.90	3.24	281.05	86.34
BTX16#31	8	6.026E-06	1.328E+06	9.08	0.76	3.06	286.24	104.00
BTX16#32	23	1.768E-05	1.301E+06	7.60	0.63	2.89	333.78	74.90
