

Yu-Ting Zhong, Zhen-Yu Luo, Roland Mundil, Xun Wei, Hai-Quan Liu, Bin He, Xiao-Long Huang, Wei Tian, and Yi-Gang Xu, 2021, Constraining the duration of the Tarim flood basalts (northwestern China): CA-TIMS zircon U-Pb dating of tuffs: GSA Bulletin, <https://doi.org/10.1130/B36053.1>.

Supplemental Material

Figure S1. U-Pb Concordia diagrams (A, C, and E) and ranked-age plots (B, D, and F) for the tuff samples, as analyzed by LA-ICP-MS. MSWD—mean square of weighted deviates.

Figure S2. U-Pb Concordia diagrams for (A) Ku-1, (B) Ku-17, and (C) Kai-25, as analyzed by CA-ID-TIMS. Data shown as gray circles were not used for the age calculations.

Table S1. Zircon LA-MC-ICP-MS U-Pb and Lu-Hf isotopic data for the tuff samples.

Figure S2

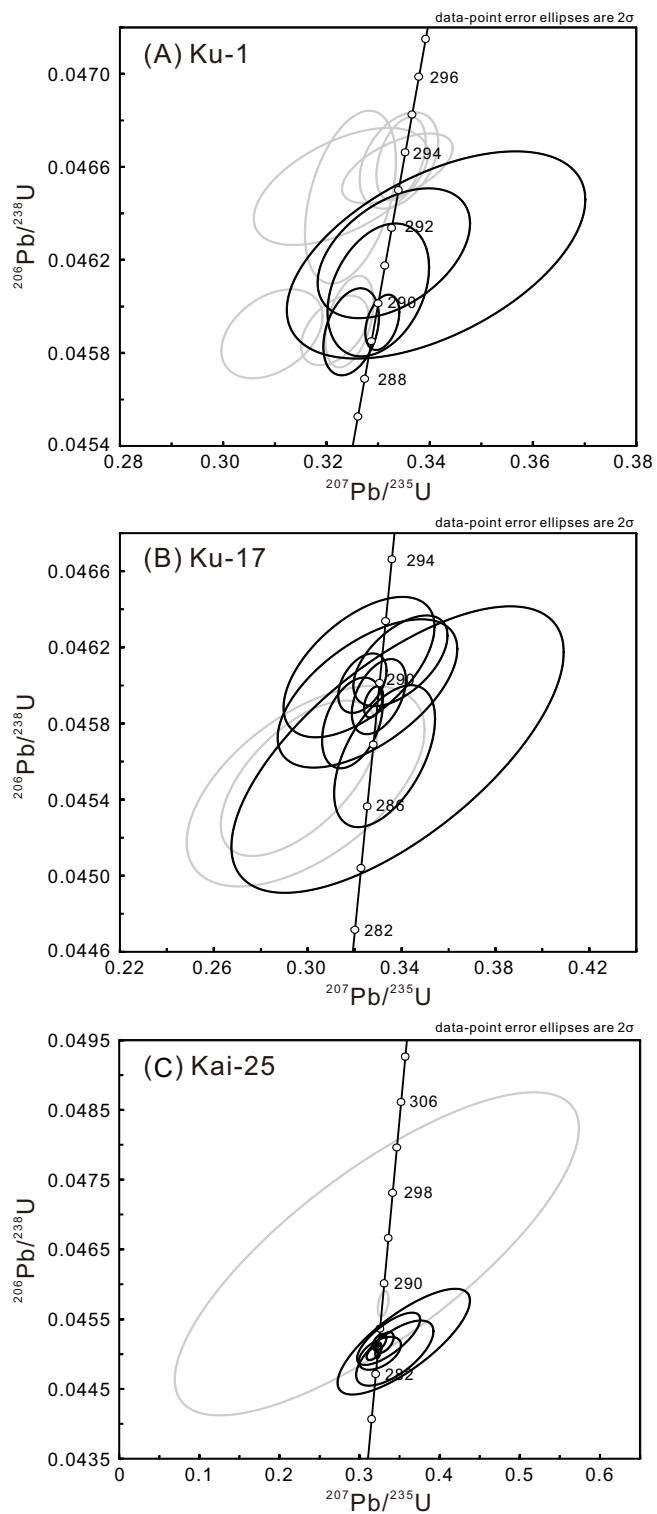


Figure S1

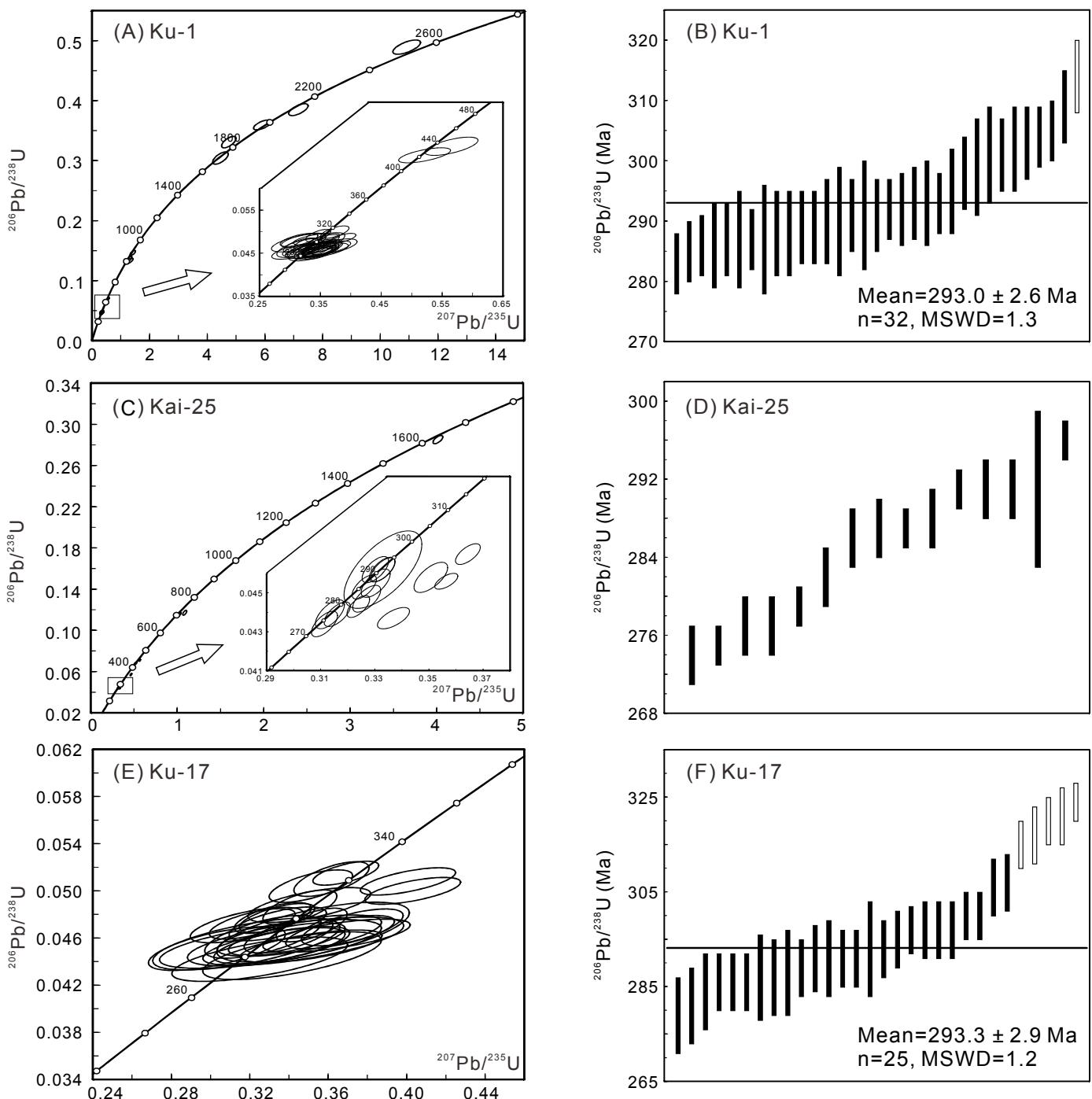


TABLE S1. ZIRCON LA-MC-ICP-MS U-PB AND IN SITU LU-HF ISOTOPIC DATA FOR THE TUFF SAMPLES

Sample/spot	Th/U	$^{207}\text{Pb}/^{235}\text{U}$	$^{206}\text{Pb}/^{238}\text{U}$	$^{206}\text{Pb}/^{238}\text{U}$ (Ma)	$^{176}\text{Lu}/^{177}\text{Hf}$	$^{176}\text{Hf}/^{177}\text{Hf}$	2σ	$\varepsilon_{\text{Hf}(t)}$	2σ	T_{DM2} (Ma)
Ku-1										
Ku-1_01	0.55	5.9098	0.3595	1980						
Ku-1_02	0.52	0.3428	0.0458	289	0.000818	0.282466	0.000017	-4.6	0.6	1597
Ku-1_03	0.48	0.3454	0.0455	287	0.001200	0.282442	0.000019	-5.6	0.7	1656
Ku-1_04	0.52	0.3187	0.0458	289	0.000776	0.282473	0.000018	-4.4	0.6	1581
Ku-1_05	0.54	0.3351	0.0461	291	0.001097	0.282579	0.000024	-0.7	0.8	1346
Ku-1_06	0.50	0.3415	0.0454	286	0.000833	0.282461	0.000019	-4.9	0.7	1610
Ku-1_07	0.55	0.3523	0.0464	292	0.000826	0.282474	0.000019	-4.3	0.7	1578
Ku-1_08	0.63	0.3497	0.0465	293						
Ku-1_09	0.10	0.3738	0.0499	314						
Ku-1_10	0.46	0.3705	0.0465	293						
Ku-1_11	0.45	0.3579	0.0457	288	0.000654	0.282476	0.000017	-4.3	0.6	1573
Ku-1_12	0.45	0.3675	0.0463	292	0.000575	0.282481	0.000020	-4.0	0.7	1559
Ku-1_13	0.91	1.4184	0.1463	880						
Ku-1_14	0.57	0.3468	0.0449	283	0.000753	0.282441	0.000019	-5.6	0.7	1656
Ku-1_15	0.43	0.3462	0.0453	285	0.001692	0.282582	0.000027	-0.8	1.0	1350
Ku-1_16	0.50	0.3412	0.0455	287	0.000734	0.282489	0.000020	-3.9	0.7	1546
Ku-1_17	0.52	0.3165	0.0468	295						
Ku-1_18	0.48	4.749	0.3309	1843						
Ku-1_19	0.56	0.3463	0.0491	309						
Ku-1_20	0.72	10.2215	0.4904	2572						
Ku-1_21	0.45	0.3158	0.0462	291	0.001950	0.282526	0.000022	-2.7	0.8	1475
Ku-1_22	0.51	0.3434	0.0483	304						
Ku-1_23	0.50	0.3149	0.0481	303						
Ku-1_24	0.58	0.3873	0.0485	305						
Ku-1_25	0.56	0.3582	0.0478	301						
Ku-1_26	0.25	7.1616	0.385	2100						
Ku-1_27	0.55	0.326	0.0472	298						
Ku-1_28	0.77	0.5653	0.0698	435						

Ku-1_29	0.35	0.3371	0.0461	291	0.001266	0.282473	0.000015	-4.4	0.5	1586
Ku-1_30	0.51	1.3098	0.1367	826						
Ku-1_31	1.35	0.5212	0.0677	422						
Ku-1_32	0.52	0.3375	0.0465	293						
Ku-1_33	0.48	0.3531	0.0461	290	0.000573	0.282450	0.000019	-5.1	0.7	1629
Ku-1_34	0.48	0.3401	0.046	290						
Ku-1_35	0.47	0.336	0.0456	288	0.000763	0.282474	0.000022	-4.4	0.8	1579
Ku-1_36	0.61	0.3144	0.0474	299						
Ku-1_37	0.47	4.4577	0.3043	1713						
Ku-1_38	0.49	0.3497	0.0455	287						
Ku-1_39	0.55	0.339	0.0455	287						
Ku-1_40	0.62	1.3015	0.133	805						
Ku-1_41	0.85	0.3546	0.0478	301						
Ku-1_42	0.51	0.3095	0.0454	286						
Ku-1_43	0.50	0.322	0.048	302						

Ku-17

Ku-17_01	0.51	0.3251	0.0442	279	0.000675	0.282465	0.000024	-4.9	0.8	1604
Ku-17_02	0.55	0.3416	0.0445	281	0.000778	0.282436	0.000022	-5.9	0.8	1668
Ku-17_03	0.48	0.3523	0.0465	293	0.000694	0.282494	0.000022	-3.5	0.8	1531
Ku-17_04	0.55	0.3363	0.0454	286	0.000929	0.282536	0.000020	-2.2	0.7	1444
Ku-17_05	0.59	0.3504	0.0488	307						
Ku-17_06	0.59	0.3389	0.0459	289	0.001037	0.282506	0.000024	-3.3	0.8	1510
Ku-17_07	0.58	0.3213	0.0472	297	0.001599	0.282490	0.000019	-3.8	0.7	1548
Ku-17_08	0.66	0.3512	0.0504	317						
Ku-17_09	0.64	0.3186	0.0471	297						
Ku-17_10	0.53	0.3183	0.0455	287	0.000784	0.282480	0.000017	-4.2	0.6	1567
Ku-17_11	0.64	0.3434	0.0457	288	0.000753	0.282495	0.000020	-3.6	0.7	1532
Ku-17_12	0.60	0.3454	0.0462	291	0.000688	0.282480	0.000018	-4.1	0.6	1563
Ku-17_13	0.62	0.3268	0.0461	291	0.000930	0.282459	0.000018	-4.9	0.7	1613
Ku-17_14	0.66	0.3033	0.0451	284	0.001018	0.282427	0.000020	-6.2	0.7	1690

Ku-17_15	0.60	0.3306	0.0455	287	0.001002	0.282478	0.000019	-4.3	0.7	1574
Ku-17_16	0.68	0.3516	0.0471	297	0.001003	0.282467	0.000019	-4.5	0.7	1592
Ku-17_17	0.50	0.3723	0.0469	295	0.000744	0.282467	0.000018	-4.5	0.6	1590
Ku-17_18	0.54	0.3343	0.0472	297	0.001371	0.282469	0.000020	-4.5	0.7	1592
Ku-17_19	0.64	0.3617	0.051	321						
Ku-17_20	0.66	0.3318	0.0477	300						
Ku-17_21	0.77	0.369	0.0515	324						
Ku-17_22	0.59	0.3661	0.0465	293	0.000854	0.282474	0.000020	-4.3	0.7	1577
Ku-17_23	0.56	0.3339	0.0477	300						
Ku-17_24	0.87	0.4007	0.0508	320						
Ku-17_25	0.65	0.3456	0.0486	306						
Ku-17_26	0.58	0.3643	0.0462	291						
Ku-17_27	0.58	0.3324	0.0453	286						
Ku-17_28	0.85	0.4031	0.05	315						
Ku-17_29	0.63	0.3398	0.0462	291	0.001009	0.282500	0.000021	-3.4	0.7	1522
Ku-17_30	0.69	0.3513	0.0453	286	0.001096	0.282444	0.000025	-5.5	0.9	1651

Kai-25

Kai-25_01	0.32	0.333	0.0462	291	0.002339	0.282440	0.000020	-5.8	0.7	1672
Kai-25_02	0.37	0.3369	0.0437	275						
Kai-25_03	0.41	0.3507	0.0458	288	0.001484	0.282387	0.000011	-7.6	0.4	1782
Kai-25_04	0.34	0.3261	0.0453	286	0.000987	0.282402	0.000012	-7.0	0.4	1744
Kai-25_05	0.33	0.3644	0.047	296	0.000789	0.282434	0.000009	-5.6	0.3	1664
Kai-25_06	0.49	0.3302	0.0462	291	0.001473	0.282486	0.000011	-4.0	0.4	1559
Kai-25_07	0.73	0.3327	0.0462	291	0.001353	0.282379	0.000016	-7.8	0.6	1797
Kai-25_08	1.18	0.5678	0.071	442						
Kai-25_09	0.39	0.333	0.0462	291	0.001844	0.282462	0.000016	-4.9	0.6	1617
Kai-25_10	0.57	0.3161	0.0439	277						
Kai-25_11	1.15	0.5218	0.0681	425						
Kai-25_12	0.48	0.3134	0.0439	277	0.001181	0.282414	0.000010	-6.8	0.4	1725
Kai-25_13	0.79	0.5256	0.0686	427						

Kai-25_14	0.24	0.4656	0.0571	358						
Kai-25_15	0.64	1.0871	0.1171	714						
Kai-25_16	0.61	0.5099	0.0674	420						
Kai-25_17	0.65	0.327	0.0447	282	0.001024	0.282398	0.000011	-7.2	0.4	1756
Kai-25_18	0.51	0.3114	0.0434	274	0.001514	0.282452	0.000012	-5.6	0.4	1645
Kai-25_19	0.66	0.3303	0.0455	287						
Kai-25_20	0.74	4.0142	0.2852	1617						
Kai-25_21	0.59	0.3564	0.0456	287						
Kai-25_22	0.40	0.3239	0.0443	279						
