

Table S3 LA-ICP-MS Lu-Hf analysis results of the magmatic rock zircons

Sample No.	Age (Ma)	$^{176}\text{Yb}/^{177}\text{Hf}$	$^{176}\text{Lu}/^{177}\text{Hf}$	$^{176}\text{Hf}/^{177}\text{Hf}$	$\varepsilon_{\text{Hf}}(0)$	$\varepsilon_{\text{Hf}}(t)$	T_{DM} (Ma)	T_{DM}^{C} (Ma)	$f_{\text{Lu/Hf}}$
DP-141-1	815	0.025122	0.000867	0.282247	-18.58	-1.07	1414.51	2174.72	-0.97
DP-141-2	813	0.032683	0.001113	0.282175	-21.11	-3.8	1524.09	2415.66	-0.97
DP-141-3	814	0.016622	0.000574	0.282344	-15.13	2.52	1269.08	1854.06	-0.98
DP-141-4	817	0.038887	0.001353	0.282283	-17.28	0.02	1380.98	2079.24	-0.96
DP-141-5	815	0.025639	0.000866	0.282216	-19.65	-2.15	1456.83	2271.03	-0.97
DP-141-6	817	0.032357	0.001273	0.282307	-16.45	0.9	1344.93	2000.7	-0.96
DP-141-7	814	0.020715	0.000752	0.282214	-19.72	-2.17	1454.87	2271.81	-0.98
DP-141-8	819	0.01984	0.000726	0.282255	-18.28	-0.61	1397.67	2136.4	-0.98
DP-141-9	817	0.039905	0.001455	0.282409	-12.84	4.4	1207.07	1687.7	-0.96
DP-141-10	817	0.015492	0.000636	0.282281	-17.37	0.3	1358.86	2053.73	-0.98
DP-141-11	815	0.022939	0.000919	0.282393	-13.42	4.08	1212.75	1715.48	-0.97
DP-141-12	817	0.037579	0.001455	0.28244	-11.76	5.49	1163.47	1590.21	-0.96
DP-141-13	814	0.04223	0.001614	0.282078	-24.55	-7.48	1681.76	2743.23	-0.95
DP-141-14	815	0.015181	0.000612	0.282382	-13.79	3.86	1217.75	1734.55	-0.98
DP-141-15	818	0.0248	0.000961	0.282289	-17.1	0.42	1359.58	2043.73	-0.97
DP205-01	787	0.034523	0.001243	0.282284	-17.3	-0.5	1376	2109	-0.96
DP205-02	793	0.039493	0.001631	0.282238	-18.9	-2.3	1456	2266	-0.95
DP205-03	744	0.029166	0.00117	0.282204	-20.1	-4.3	1486	2413	-0.96
DP205-04	754	0.052121	0.002067	0.282262	-18	-2.5	1439	2257	-0.94
DP205-05	718	0.044345	0.001876	0.282307	-16.4	-1.5	1367	2150	-0.94
DP205-06	727	0.041901	0.001706	0.282247	-18.6	-3.4	1447	2323	-0.95
DP205-08	744	0.029653	0.001203	0.282272	-17.7	-1.9	1391	2199	-0.96
DP205-09	783	0.045326	0.001837	0.282219	-19.5	-3.2	1491	2347	-0.94
DP205-10	796	0.02157	0.00091	0.2823	-16.7	0.4	1342	2033	-0.97
DP205-11	770	0.043279	0.00158	0.282241	-18.8	-2.6	1450	2283	-0.95
DP205-12	778	0.062737	0.002623	0.2823	-17	-1	1406	2135	-0.92
DP212-12	742	0.054361	0.002337	0.282321	-15.9	-0.7	1363	2096	-0.93
DP212-01	757	0.029496	0.001075	0.282407	-12.9	3.25	1197.41	1750.21	-0.97
DP212-02	763	0.050124	0.001777	0.282436	-11.89	4.04	1179.07	1683.75	-0.95

DP212-03	764	0.030249	0.001231	0.282433	-12	4.23	1166.3	1667.51	-0.96
DP212-04	754	0.044785	0.001718	0.282475	-10.49	5.29	1120.47	1566.27	-0.95
DP212-05	757	0.04649	0.001752	0.282505	-9.42	6.4	1078.38	1468.67	-0.95
DP212-06	745	0.052461	0.002081	0.282514	-9.13	6.28	1075.8	1470.98	-0.94
DP212-07	747	0.078668	0.003004	0.282407	-12.89	2.09	1261.38	1847.26	-0.91
DP212-08	754	0.039576	0.001508	0.28237	-14.23	1.65	1264.35	1891.67	-0.95
DP212-09	756	0.025349	0.001041	0.282488	-10.03	6.13	1082.21	1492.36	-0.97
DP212-10	761	0.038134	0.001547	0.282458	-11.1	4.91	1139.86	1604.65	-0.95
DP212-11	768	0.041167	0.001554	0.282608	-5.8	10.36	926.37	1120.59	-0.95
DP212-12	750	0.054131	0.001933	0.282558	-7.57	8.02	1008.06	1318.64	-0.94
DP212-13	764	0.039653	0.00142	0.28243	-12.09	4.05	1175.63	1683.76	-0.96

$$\varepsilon_{\text{Hf}}(t) = 10000 \times (\{[(^{176}\text{Hf}/^{177}\text{Hf})_{\text{S}} - (^{176}\text{Lu}/^{177}\text{Hf})_{\text{S}} \times (e^{\lambda t} - 1)] / [(^{176}\text{Hf}/^{177}\text{Hf})_{\text{CHUR}, 0} - (^{176}\text{Lu}/^{177}\text{Hf})_{\text{CHUR}} \times (e^{\lambda t} - 1)] - 1\});$$

$$T_{\text{DM}} = 1/\lambda \times \ln \{1 + [(^{176}\text{Hf}/^{177}\text{Hf})_{\text{S}} - (^{176}\text{Hf}/^{177}\text{Hf})_{\text{DM}}] / [(^{176}\text{Hf}/^{177}\text{Hf})_{\text{S}} - (^{176}\text{Hf}/^{177}\text{Hf})_{\text{DM}}]\};$$

$$T_{\text{DM}}^{\text{C}} = T_{\text{DM}} - (T_{\text{DM}} - t) \times [(f_{\text{cc}} - f_{\text{S}}) / (f_{\text{cc}} - f_{\text{DM}})], \quad f_{\text{Lu}/\text{Hf}} = (^{176}\text{Lu}/^{177}\text{Hf})_{\text{S}} / (^{176}\text{Lu}/^{177}\text{Hf})_{\text{CHUR}} - 1.$$

$\lambda = 1.867 \times 10^{-11}/\text{a}$ [70]; $(^{176}\text{Lu}/^{177}\text{Hf})_{\text{S}}$ and $(^{176}\text{Hf}/^{177}\text{Hf})_{\text{S}}$ are the measured values of samples; $(^{176}\text{Lu}/^{177}\text{Hf})_{\text{CHUR}} = 0.0332$, $(^{176}\text{Hf}/^{177}\text{Hf})_{\text{CHUR}, 0} = 0.282772$ [71]; $(^{176}\text{Lu}/^{177}\text{Hf})_{\text{DM}} = 0.0384$, $(^{176}\text{Hf}/^{177}\text{Hf})_{\text{DM}} = 0.28325$ [40]; $(^{176}\text{Lu}/^{177}\text{Hf})_{\text{average crust}} = 0.015$; $f_{\text{cc}} = [(^{176}\text{Lu}/^{177}\text{Hf})_{\text{average crust}} / (^{176}\text{Lu}/^{177}\text{Hf})_{\text{CHUR}}] - 1$; $f_{\text{S}} = f_{\text{Lu}/\text{Hf}}$; $f_{\text{DM}} = [(^{176}\text{Lu}/^{177}\text{Hf})_{\text{DM}} / (^{176}\text{Lu}/^{177}\text{Hf})_{\text{CHUR}}] - 1$; t is the crystallization age of zircon.