Table A1. LA-ICP-MS zircon U–Pb analytical results for the Niigata tephras. Data in italics (>75% common Pb contamination or >2 Ma) were excluded for further U–Pb analyses.

Sample name	Th (ppm)	U (ppm)	Th/U	$f_{Th/U}$[a]	f_{206}%[b]	Total $^{207}Pb/^{206}Pb$	2σ	$^{207}Pb/^{235}U$	2σ	$^{206}Pb/^{238}U$	2σ	Age (#2) [Ma][c] $^{206}Pb/^{238}U$	2σ	MSWD[d]	Age (#3) [Ma][c] $^{206}Pb/^{238}U$	2σ	MSWD[d]
HK10 measured on 05/09/2016 with 40μm laser beam.																	
HK10-01	894	1,342	0.67	0.17	-0.4	0.04266	0.00720	0.00157	0.00032	0.000267	0.000018	1.79	0.12		1.81	0.12	
HK10-02	379	701	0.54	0.14	1.8	0.06064	0.01683	0.00211	0.00051	0.000253	0.000014	1.67	0.09		1.71	0.09	
HK10-03	335	459	0.73	0.18	0.0	0.04634	0.01922	0.00153	0.00067	0.000239	0.000015	1.61	0.10		1.63	0.10	
HK10-04	287	399	0.72	0.18	-0.7	0.04087	0.01432	0.00124	0.00041	0.000219	0.000014	1.49	0.09		1.50	0.09	
HK10-05	519	823	0.63	0.16	-0.3	0.04400	0.01376	0.00159	0.00047	0.000262	0.000020	1.76	0.13		1.78	0.13	
HK10-06	1,239	1,332	0.93	0.23	-0.7	0.04052	0.01126	0.00130	0.00033	0.000232	0.000021	1.56	0.13		1.58	0.13	
HK10-07	570	715	0.80	0.20	0.7	0.05152	0.01549	0.00179	0.00046	0.000253	0.000017	1.69	0.11		1.72	0.11	
HK10-08	861	830	1.04	0.26	-0.5	0.04194	0.01182	0.00156	0.00049	0.000270	0.000013	1.81	0.09		1.82	0.09	
HK10-09	*172*	*304*	*0.56*	*0.14*	*17.7*	*0.18528*	*0.04765*	*0.01100*	*0.00238*	*0.000431*	*0.000029*	*2.35*	*0.19*		*2.39*	*0.22*	
HK10-10	529	1,046	0.51	0.13	2.7	0.06709	0.01787	0.00254	0.00072	0.000275	0.000012	1.80	0.08		1.83	0.08	
HK10-11	124	207	0.60	0.15	0.2	0.04741	0.03865	0.00147	0.00157	0.000224	0.000038	1.52	0.25		1.54	0.25	
HK10-12	187	251	0.74	0.19	14.9	0.16292	0.08617	0.00587	0.00253	0.000262	0.000031	1.50	0.20		1.54	0.24	
HK10-13	*94*	*195*	*0.48*	*0.12*	*0.0*	*0.04648*	*0.03507*	*0.00246*	*0.00208*	*0.000385*	*0.000034*	*2.55*	*0.22*		*2.57*	*0.22*	
HK10-14	202	334	0.61	0.15	0.4	0.04923	0.03349	0.00152	0.00088	0.000223	0.000033	1.51	0.21		1.53	0.21	
HK10-15	177	302	0.59	0.15	1.3	0.05616	0.01378	0.00185	0.00045	0.000239	0.000014	1.60	0.09		1.63	0.09	
HK10-16	233	449	0.52	0.13	15.2	0.16559	0.07872	0.00580	0.00292	0.000254	0.000022	1.45	0.14		1.50	0.20	
HK10-17	317	402	0.79	0.20	0.8	0.05277	0.03068	0.00172	0.00109	0.000236	0.000019	1.58	0.12		1.61	0.13	
HK10-18	437	553	0.79	0.20	2.2	0.06360	0.01711	0.00217	0.00055	0.000247	0.000026	1.63	0.17		1.66	0.15	
HK10-19	98	158	0.62	0.15	11.1	0.13323	0.07080	0.00459	0.00269	0.000250	0.000033	1.50	0.21		1.54	0.22	
HK10-20	*400*	*706*	*0.57*	*0.14*	*-0.1*	*0.04566*	*0.00885*	*0.00508*	*0.00102*	*0.000808*	*0.000036*	*5.28*	*0.23*		*5.30*	*0.23*	
										Weighted mean (n=17)		*1.66*	*0.06*	*4.5*	*1.68*	*0.06*	*4.0*
Odaira measured on 12/01/2016 with 40μm laser beam and 01/25/2018 with 30μm laser beam.																	
OHIRA-1	154	169	0.91	0.23	11.2	0.13387	0.05165	0.00278	0.00099	0.000151	0.000025	0.92	0.16		0.96	0.14	
OHIRA-2	92	117	0.79	0.20	26.9	0.25721	0.05701	0.00799	0.00206	0.000226	0.000023	1.11	0.15		1.16	0.14	
OHIRA-3	99	116	0.86	0.21	3.7	0.07521	0.05441	0.00172	0.00113	0.000166	0.000026	1.09	0.17		1.13	0.16	
OHIRA-4	102	150	0.68	0.17	40.2	0.36174	0.10732	0.01287	0.00532	0.000258	0.000039	1.04	0.25		1.10	0.26	
OHIRA-5	*361*	*534*	*0.68*	*0.17*	*0.1*	*0.04678*	*0.00247*	*0.06489*	*0.00343*	*0.010064*	*0.000188*	*64.57*	*1.21*		*64.64*	*1.21*	
OHIRA-6	139	144	0.96	0.24	8.6	0.11378	0.04969	0.00263	0.00090	0.000168	0.000017	1.05	0.11		1.08	0.12	
OHIRA-7	326	346	0.94	0.24	3.3	0.07180	0.03676	0.00168	0.00078	0.000170	0.000017	1.12	0.11		1.15	0.11	
OHIRA-8	191	354	0.54	0.13	2.3	0.06444	0.02044	0.00161	0.00054	0.000181	0.000013	1.21	0.09		1.24	0.08	
OHIRA-9	*59*	*49*	*1.20*	*0.30*	*16.2*	*0.17354*	*0.04140*	*0.03171*	*0.00682*	*0.001326*	*0.000127*	*7.21*	*0.82*		*7.25*	*0.77*	
OHIRA-10	*314*	*451*	*0.70*	*0.17*	*0.6*	*0.05103*	*0.00207*	*0.07559*	*0.00354*	*0.010748*	*0.000202*	*68.56*	*1.30*		*68.70*	*1.28*	
OHIRA-11	246	267	0.92	0.23	4.2	0.07884	0.02421	0.00212	0.00051	0.000195	0.000023	1.27	0.15		1.30	0.13	
OHIRA-12	130	119	1.09	0.27	57.9	0.50150	0.07921	0.03202	0.00943	0.000463	0.000086	1.28	0.55		1.35	0.36	
OHIRA-13	*131*	*123*	*1.07*	*0.27*	*32.3*	*0.30032*	*0.13277*	*0.12649*	*0.06580*	*0.003056*	*0.000374*	*13.36*	*2.41*		*13.44*	*3.61*	
OHIRA-14	165	222	0.75	0.19	5.7	0.09092	0.03657	0.00189	0.00068	0.000151	0.000018	0.98	0.11		1.02	0.11	
OHIRA-15	*121*	*142*	*0.85*	*0.21*	*80.1*	*0.67564*	*1.38401*	*0.01899*	*0.03330*	*0.000204*	*0.000031*	*0.28*	*0.20*		*1.40*	*0.20*	
OHIRA-16	*205*	*287*	*0.71*	*0.18*	*-0.1*	*0.04563*	*0.00202*	*0.07198*	*0.00410*	*0.011447*	*0.000298*	*73.44*	*1.92*		*73.46*	*1.90*	
OHIRA-17	*322*	*479*	*0.67*	*0.17*	*0.1*	*0.04678*	*0.00167*	*0.07033*	*0.00349*	*0.010908*	*0.000374*	*69.95*	*2.41*		*70.03*	*2.39*	
OHIRA-18	71	98	0.72	0.18	6.8	0.09941	0.06709	0.00248	0.00162	0.000181	0.000019	1.16	0.12		1.19	0.14	
OHIRA-19	56	79	0.72	0.18	47.6	0.42021	0.15843	0.01803	0.01087	0.000311	0.000076	1.09	0.49		1.16	0.45	
OHIRA-20	*884*	*1,185*	*0.75*	*0.19*	*0.1*	*0.04694*	*0.00122*	*0.08672*	*0.00295*	*0.013405*	*0.000368*	*85.82*	*2.37*		*85.93*	*2.35*	
OOD-1	163	204	0.80	0.20	11.3	0.13510	0.08213	0.00349	0.00228	0.000187	0.000035	1.14	0.23		1.17	0.21	
OOD-2	102	129	0.79	0.20	66.8	0.57105	0.34371	0.02361	0.00445	0.000300	0.000098	0.67	0.63		*2.02*	*0.63*	
OOD-3	114	134	0.85	0.21	60.1	0.51817	0.25536	0.02196	0.00740	0.000307	0.000064	0.82	0.42		0.89	0.67	
OOD-4(2)	131	157	0.83	0.21	22.7	0.22432	0.12095	0.00712	0.00461	0.000230	0.000044	1.21	0.28		1.25	0.29	
OOD-5	470	464	1.01	0.25	6.5	0.09683	0.04060	0.00221	0.00093	0.000166	0.000012	1.07	0.08		1.09	0.09	
OOD-6	204	232	0.88	0.22	0.2	0.04793	0.05900	0.00117	0.00139	0.000177	0.000031	1.21	0.20		1.22	0.20	
OOD-7	3,124	1,595	1.96	0.49	3.9	0.07684	0.06031	0.00166	0.00148	0.000157	0.000014	1.02	0.09		1.04	0.12	
OOD-8	271	305	0.89	0.22	8.4	0.11174	0.07637	0.00282	0.00165	0.000183	0.000025	1.15	0.16		1.18	0.17	
OOD-9	*37*	*65*	*0.57*	*0.14*	*-0.3*	*0.04355*	*0.08368*	*0.00289*	*0.00513*	*0.000481*	*0.000080*	*3.18*	*0.52*		*3.19*	*0.52*	
OOD-10	*78*	*142*	*0.55*	*0.14*	*0.3*	*0.04827*	*0.01341*	*0.00853*	*0.00216*	*0.001282*	*0.000103*	*8.32*	*0.67*		*8.35*	*0.63*	
OOD-11	90	149	0.60	0.15	9.6	0.12168	0.06772	0.00351	0.00264	0.000209	0.000038	1.29	0.24		1.32	0.22	
OOD-12	63	97	0.65	0.16	30.9	0.28914	0.20959	0.00940	0.00561	0.000236	0.000035	1.10	0.23		1.16	0.43	
OOD-13	*373*	*612*	*0.61*	*0.15*	*0.8*	*0.05254*	*0.00813*	*0.00765*	*0.00156*	*0.001057*	*0.000068*	*6.83*	*0.44*		*6.86*	*0.42*	
OOD-14(2)	129	197	0.65	0.16	9.7	0.12257	0.06803	0.00308	0.00142	0.000182	0.000031	1.13	0.20		1.16	0.18	
OOD-15	210	254	0.83	0.21	17.0	0.17932	0.13387	0.00401	0.00198	0.000162	0.000025	0.93	0.16		0.97	0.21	
OOD-16	*68*	*66*	*1.04*	*0.26*	*3.2*	*0.07113*	*0.04909*	*0.01036*	*0.00714*	*0.001057*	*0.000141*	*6.66*	*0.91*		*6.68*	*0.88*	
OOD-17	212	198	1.07	0.27	6.3	0.09581	0.10302	0.00213	0.00256	0.000161	0.000028	1.04	0.18		1.07	0.20	
OOD-18	170	176	0.97	0.24	14.7	0.16144	0.08833	0.00469	0.00355	0.000211	0.000066	1.22	0.42		1.25	0.31	
OOD-19	82	117	0.70	0.17	7.6	0.10615	0.06781	0.00219	0.00280	0.000150	0.000046	0.96	0.30		0.99	0.23	
OOD-20	124	145	0.85	0.21	8.6	0.11330	0.12405	0.00248	0.00270	0.000159	0.000033	1.00	0.21		1.03	0.23	
										Weighted mean (n=28)		*1.09*	*0.04*	*1.6*			
										Weighted mean (n=27)					*1.13*	*0.04*	*1.6*
Og measured on 12/01/2016 with 40μm laser beam.																	
OGTF-1	80	72	1.12	0.28	63.2	0.54285	0.13993	0.05195	0.04030	0.000694	0.000412	1.67	2.66		1.75	1.01	
OGTF-2	328	199	1.65	0.41	57.5	0.49789	0.09054	0.02525	0.00573	0.000368	0.000030	1.03	0.20		1.09	0.28	
OGTF-3	452	326	1.39	0.35	28.6	0.27122	0.05710	0.00797	0.00155	0.000213	0.000012	1.02	0.08		1.06	0.11	
OGTF-4	176	141	1.25	0.31	8.4	0.11234	0.07791	0.00286	0.00157	0.000184	0.000029	1.14	0.19		1.18	0.19	
OGTF-5	36	37	0.98	0.24	57.2	0.49584	0.61337	0.01816	0.00950	0.000266	0.000085	0.76	0.55		1.79	0.55	
OGTF-6	22	28	0.79	0.20	46.4	0.41051	0.40166	0.00989	0.00742	0.000175	0.000048	0.64	0.31		0.71	0.63	
OGTF-7	88	101	0.88	0.22	9.4	0.12012	0.19777	0.00292	0.00271	0.000177	0.000030	1.09	0.19		1.13	0.32	
OGTF-8	*160*	*178*	*0.90*	*0.23*	*0.4*	*0.04888*	*0.00255*	*0.06002*	*0.00378*	*0.008909*	*0.000228*	*57.04*	*1.47*		*57.15*	*1.43*	
OGTF-9	*198*	*122*	*1.62*	*0.40*	*3.0*	*0.06984*	*0.03968*	*0.00416*	*0.00134*	*0.000432*	*0.000072*	*2.75*	*0.46*		*2.77*	*0.41*	
OGTF-10	*94*	*125*	*0.76*	*0.19*	*24.1*	*0.23552*	*0.03053*	*0.02740*	*0.00482*	*0.000844*	*0.000073*	*4.18*	*0.47*		*4.23*	*0.39*	
OGTF-11	129	90	1.42	0.36	8.5	0.11321	0.10276	0.00261	0.00202	0.000167	0.000031	1.04	0.20		1.07	0.21	
OGTF-12	149	107	1.40	0.35	24.4	0.23757	0.09596	0.00552	0.00211	0.000168	0.000019	0.86	0.12		0.90	0.16	

Sample name	Th (ppm)	U (ppm)	Th/U	$f_{Th/U}$[a]	f_{206}%[b]	Total $^{207}Pb/^{206}Pb$	2σ	$^{207}Pb/^{235}U$	2σ	$^{206}Pb/^{238}U$	2σ	Age (#2) [Ma][c] $^{206}Pb/^{238}U$	2σ	MSWD[d]	Age (#3) [Ma][c] $^{206}Pb/^{238}U$	2σ	MSWD[d]
OGTF-13	129	95	1.36	0.34	3.3	0.07175	0.06787	0.00187	0.00201	0.000189	0.000031	1.24	0.20		1.26	0.20	
OGTF-14	112	91	1.22	0.31	11.8	0.13852	0.05157	0.00272	0.00097	0.000142	0.000024	0.86	0.15		0.90	0.13	
OGTF-15	174	145	1.20	0.30	16.2	0.17326	0.08719	0.00368	0.00152	0.000154	0.000018	0.88	0.12		0.92	0.14	
OGTF-16	147	118	1.25	0.31	29.6	0.27908	0.08893	0.00939	0.00359	0.000244	0.000024	1.15	0.15		1.19	0.20	
OGTF-17	*152*	*103*	*1.47*	*0.37*	*103.2*	*0.85705*	*0.05457*	*1.69579*	*0.43982*	*0.014357*	*0.003295*	*-2.95*	*21.20*		*91.96*	*20.97*	
OGTF-18	166	127	1.31	0.33	38.0	0.34510	0.05536	0.01099	0.00294	0.000231	0.000045	0.96	0.29		1.01	0.18	
OGTF-19	146	120	1.21	0.30	2.4	0.06484	0.08162	0.00127	0.00165	0.000143	0.000021	0.96	0.14		0.98	0.15	
OGTF-20	169	136	1.24	0.31	8.0	0.10903	0.05150	0.00234	0.00101	0.000156	0.000020	0.98	0.13		1.01	0.13	
										Weighted mean (n=16)		*0.99*	*0.06*	*2.1*			
										Weighted mean without no. 5 (n=15)					*1.02*	*0.06*	*1.7*
Yokokura measured on 12/01/2016 with 40μm laser beam.																	
YOKOKU-1	101	233	0.43	0.11	8.9	0.11576	0.03199	0.00209	0.00059	0.000131	0.000008	0.84	0.05		0.88	0.06	
YOKOKU-2	81	116	0.70	0.17	15.1	0.16441	0.09433	0.00280	0.00132	0.000124	0.000028	0.74	0.18		0.78	0.16	
YOKOKU-3	100	132	0.75	0.19	17.7	0.18540	0.12199	0.00252	0.00152	0.000098	0.000018	0.58	0.12		0.62	0.13	
YOKOKU-4	85	71	1.19	0.30	0.7	0.05130	0.10203	0.00126	0.00224	0.000179	0.000018	1.21	0.12		1.23	0.12	
YOKOKU-5	80	130	0.62	0.15	13.1	0.14943	0.09508	0.00257	0.00140	0.000125	0.000025	0.76	0.16		0.80	0.15	
YOKOKU-6	141	330	0.43	0.11	14.9	0.16316	0.05259	0.00246	0.00088	0.000110	0.000009	0.67	0.06		0.71	0.07	
YOKOKU-7	481	561	0.86	0.21	6.2	0.09454	0.04203	0.00161	0.00067	0.000123	0.000006	0.81	0.04		0.84	0.06	
YOKOKU-8	249	269	0.93	0.23	10.7	0.13052	0.06517	0.00174	0.00080	0.000097	0.000012	0.62	0.08		0.65	0.08	
YOKOKU-9	*225*	*219*	*1.03*	*0.26*	*77.9*	*0.65850*	*1.43206*	*0.02097*	*0.02951*	*0.000231*	*0.000118*	*0.34*	*0.76*		*1.57*	*0.76*	
YOKOKU-10	289	410	0.71	0.18	0.6	0.05115	0.02490	0.00075	0.00037	0.000107	0.000012	0.76	0.07		0.78	0.08	
YOKOKU-11	133	293	0.45	0.11	3.3	0.07200	0.03721	0.00103	0.00049	0.000104	0.000010	0.72	0.06		0.76	0.07	
YOKOKU-12	183	350	0.52	0.13	36.0	0.32916	0.07687	0.00587	0.00160	0.000129	0.000013	0.58	0.08		0.64	0.10	
YOKOKU-13	*137*	*160*	*0.85*	*0.21*	*-0.2*	*0.04488*	*0.00308*	*0.09010*	*0.00591*	*0.014566*	*0.000417*	*93.28*	*2.69*		*93.31*	*2.66*	
YOKOKU-14	*153*	*540*	*0.28*	*0.07*	*0.2*	*0.04750*	*0.00076*	*0.05746*	*0.00379*	*0.008779*	*0.000511*	*56.32*	*3.29*		*56.43*	*3.09*	
YOKOKU-15	1,821	740	2.46	0.62	5.0	0.08542	0.03524	0.00110	0.00028	0.000094	0.000011	0.60	0.07		0.63	0.07	
YOKOKU-16	335	510	0.66	0.16	70.2	0.59777	0.11568	0.02644	0.01027	0.000321	0.000098	0.64	0.63		0.73	0.34	
YOKOKU-17	623	1,038	0.60	0.15	4.6	0.08192	0.01514	0.00111	0.00020	0.000098	0.000008	0.67	0.05		0.71	0.05	
YOKOKU-18	211	242	0.87	0.22	2.0	0.06218	0.04649	0.00087	0.00051	0.000101	0.000011	0.70	0.07		0.74	0.08	
YOKOKU-19	55	91	0.60	0.15	20.2	0.20488	0.30996	0.00296	0.00190	0.000105	0.000035	0.59	0.23		0.64	0.30	
YOKOKU-20	113	281	0.40	0.10	2.4	0.06526	0.02149	0.00090	0.00032	0.000100	0.000011	0.70	0.07		0.74	0.07	
										Weighted mean without no. 4 (n=16)		*0.72*	*0.05*	*5.8*	*0.75*	*0.04*	*4.2*
Kimigaeri measured on 05/09/2016 with 40μm laser beam.																	
KIM-01	572	380	1.51	0.38	9.5	0.12040	0.06112	0.00117	0.00061	0.000071	0.000008	0.46	0.05		0.49	0.06	
KIM-02	592	756	0.78	0.20	1.7	0.05971	0.04813	0.00166	0.00046	0.000201	0.000084	1.34	0.54		1.37	0.38	
KIM-03	*381*	*304*	*1.25*	*0.31*	*-0.2*	*0.04429*	*0.00251*	*0.06029*	*0.00275*	*0.009877*	*0.000152*	*63.41*	*0.98*		*63.43*	*0.98*	
KIM-04	218	377	0.58	0.14	3.9	0.07641	0.05433	0.00115	0.00063	0.000109	0.000014	0.74	0.09		0.78	0.09	
KIM-05	740	555	1.33	0.33	51.5	0.45093	0.13527	0.00621	0.00315	0.000100	0.000030	0.34	0.19		0.40	0.14	
KIM-06	212	235	0.90	0.22	27.3	0.26053	0.31413	0.00222	0.00139	0.000062	0.000013	0.33	0.08		0.38	0.18	
KIM-07	133	231	0.57	0.14	29.8	0.28028	0.28718	0.00221	0.00147	0.000057	0.000013	0.31	0.08		0.36	0.15	
KIM-08	214	308	0.69	0.17	15.9	0.17127	0.09140	0.00160	0.00075	0.000068	0.000037	0.42	0.24		0.47	0.14	
KIM-09	171	227	0.75	0.19	49.5	0.43509	0.25914	0.00427	0.00470	0.000071	0.000040	0.26	0.26		0.33	0.19	
KIM-10	470	432	1.09	0.27	51.1	0.44751	0.08716	0.01205	0.00680	0.000195	0.000072	0.64	0.46		0.71	0.22	
KIM-11	286	319	0.90	0.22	27.4	0.26120	0.10685	0.00258	0.00107	0.000072	0.000008	0.38	0.05		0.43	0.07	
KIM-12	223	269	0.83	0.21	2.2	0.06346	0.14700	0.00051	0.00094	0.000058	0.000010	0.43	0.07		0.46	0.07	
KIM-13	*131*	*163*	*0.80*	*0.20*	*-0.1*	*0.04559*	*0.00464*	*0.04968*	*0.00412*	*0.007907*	*0.000424*	*50.84*	*2.73*		*50.86*	*2.71*	
KIM-14	345	543	0.63	0.16	7.5	0.10542	0.04233	0.00125	0.00041	0.000086	0.000009	0.58	0.06		0.62	0.06	
KIM-15	353	510	0.69	0.17	0.5	0.05008	0.03265	0.00062	0.00039	0.000090	0.000009	0.65	0.06		0.67	0.06	
KIM-16	184	230	0.80	0.20	25.7	0.24780	0.27166	0.00181	0.00126	0.000053	0.000010	0.31	0.06		0.35	0.13	
KIM-17	86	139	0.62	0.15	43.8	0.39040	0.10830	0.00510	0.00147	0.000095	0.000014	0.38	0.09		0.45	0.10	
KIM-18	144	273	0.53	0.13	4.5	0.08131	0.06633	0.00074	0.00052	0.000066	0.000006	0.48	0.04		0.51	0.05	
KIM-19	377	389	0.97	0.24	24.4	0.23810	0.07090	0.00268	0.00064	0.000082	0.000011	0.45	0.07		0.49	0.07	
KIM-20	203	284	0.71	0.18	1.0	0.05414	0.05715	0.00066	0.00065	0.000088	0.000014	0.63	0.09		0.66	0.09	
										Weighted mean without no. 2 (n=17)		*0.47*	*0.06*	*11.4*	*0.54*	*0.06*	*7.3*
Oguriyama measured on 01/25/2018 with 30μm laser beam.																	
OGURI-1	98	157	0.62	0.16	6.7	0.09915	0.17893	0.00130	0.00159	0.000095	0.000024	0.65	0.15		0.68	0.18	
OGURI-2	123	184	0.67	0.17	38.7	0.34992	0.60534	0.00581	0.00447	0.000121	0.000054	0.52	0.35		0.87	0.35	
OGURI-3	92	194	0.48	0.12	23.9	0.23408	1.81991	0.00162	0.00253	0.000050	0.000021	0.31	0.13		0.42	0.14	
OGURI-4	106	211	0.50	0.13	9.3	0.11906	0.22716	0.00106	0.00163	0.000065	0.000014	0.45	0.09		0.48	0.14	
OGURI-5	89	190	0.47	0.12	0.1	0.04665	0.26663	0.00042	0.00091	0.000065	0.000031	0.50	0.20		0.51	0.20	
OGURI-6	*255*	*348*	*0.73*	*0.18*	*0.0*	*0.04633*	*0.00368*	*0.05861*	*0.00610*	*0.009179*	*0.000467*	*58.96*	*3.01*		*58.99*	*2.98*	
OGURI-7	106	229	0.46	0.12	13.4	0.15173	0.73414	0.00126	0.00170	0.000060	0.000021	0.41	0.14		0.48	0.14	
OGURI-8	87	172	0.50	0.13	-1.2	0.03640	0.46085	0.00044	0.00276	0.000088	0.000025	0.65	0.16		0.66	0.16	
OGURI-9(2)	45	96	0.47	0.12	24.0	0.23472	58.87152	0.00164	0.00209	0.000051	0.000019	0.31	0.12		0.42	0.13	
OGURI-10	75	148	0.51	0.13	25.9	0.24985	1.20976	0.00286	0.00317	0.000083	0.000033	0.46	0.21		0.63	0.21	
OGURI-11	88	193	0.45	0.11	22.8	0.22541	1.39200	0.00133	0.00166	0.000043	0.000015	0.28	0.10		0.37	0.10	
OGURI-12	123	244	0.51	0.13	9.1	0.11745	1.05368	0.00076	0.00191	0.000047	0.000021	0.35	0.14		0.39	0.14	
OGURI-13	58	125	0.46	0.12	3.2	0.07118	2.91249	0.00052	0.00237	0.000053	0.000028	0.41	0.18		0.43	0.19	
OGURI-14	105	210	0.50	0.13	19.3	0.19785	0.33573	0.00110	0.00115	0.000040	0.000013	0.27	0.08		0.31	0.13	
OGURI-15	66	128	0.51	0.13	-7.6	-0.01393	0.27019	-0.00013	0.00181	0.000069	0.000013	0.53	0.08		0.54	0.08	
OGURI-16	72	144	0.50	0.13	-7.3	-0.01092	0.34745	-0.00011	0.00239	0.000074	0.000020	0.55	0.13		0.57	0.13	
OGURI-17	72	141	0.51	0.13	57.2	0.49566	0.93648	0.00582	0.00457	0.000085	0.000062	0.27	0.40		0.64	0.41	
OGURI-18	*376*	*906*	*0.41*	*0.10*	*0.2*	*0.04764*	*0.00284*	*0.06776*	*0.00488*	*0.010320*	*0.000329*	*66.14*	*2.12*		*66.27*	*2.05*	
OGURI-19	87	183	0.48	0.12	42.5	0.37974	0.99367	0.00458	0.00543	0.000088	0.000048	0.37	0.31		0.66	0.32	
OGURI-20	73	168	0.43	0.11	6.4	0.09610	2.63581	0.00060	0.00144	0.000045	0.000025	0.35	0.16		0.38	0.17	
										Weighted mean (n=18)		*0.41*	*0.06*	*3.4*	*0.48*	*0.06*	*2.3*
Shimizu Pass measured on 07/28/2016 with 30μm laser beam.																	
SP4-1	*580*	*606*	*0.96*	*0.24*	*0.1*	*0.04694*	*0.00691*	*0.06859*	*0.01073*	*0.010602*	*0.000427*	*67.98*	*2.75*		*68.07*	*2.73*	
SP4-2	682	1,404	0.49	0.12	0.5	0.04981	0.05793	0.00068	0.00078	0.000100	0.000017	0.71	0.11		0.74	0.11	

Sample name	Th (ppm)	U (ppm)	Th/U	$f_{Th/U}$[a]	f_{206}%[b]	Total $^{207}Pb/^{206}Pb$	2σ	$^{207}Pb/^{235}U$	2σ	$^{206}Pb/^{238}U$	2σ	Age (#2) [Ma][c] $^{206}Pb/^{238}U$	2σ	MSWD[d]	Age (#3) [Ma][c] $^{206}Pb/^{238}U$	2σ	MSWD[d]
SP4-3	243	198	1.22	0.31	61.1	0.52645	0.33046	0.01251	0.00797	0.000172	0.000076	0.45	0.49		1.19	0.49	
SP4-4	364	255	1.42	0.36	21.8	0.21726	0.30226	0.00423	0.00285	0.000141	0.000048	0.75	0.31		0.79	0.39	
SP4-5	*174*	*271*	*0.64*	*0.16*	*17.7*	*0.18535*	*0.10663*	*0.37530*	*0.22509*	*0.014692*	*0.000888*	*77.52*	*5.72*		*77.78*	*13.44*	
SP4-6	*1,491*	*1,406*	*1.06*	*0.27*	*0.3*	*0.04862*	*0.00291*	*0.10627*	*0.00677*	*0.015860*	*0.000561*	*101.17*	*3.61*		*101.52*	*3.56*	
SP4-7	85	167	0.51	0.13	35.7	0.32693	0.40516	0.00736	0.00539	0.000163	0.000068	0.72	0.44		0.78	0.59	
SP4-8	362	548	0.66	0.17	24.0	0.23438	0.16108	0.00282	0.00189	0.000087	0.000017	0.48	0.11		0.53	0.14	
SP4-9	324	542	0.60	0.15	16.0	0.17183	0.13336	0.00196	0.00145	0.000083	0.000024	0.51	0.16		0.55	0.14	
SP4-10	316	622	0.51	0.13	35.7	0.32654	0.10271	0.00428	0.00182	0.000095	0.000019	0.44	0.12		0.50	0.10	
SP4-11	821	561	1.46	0.37	56.1	0.48689	9.84897	0.00332	0.00529	0.000049	0.000037	0.16	0.24		0.39	0.26	
SP4-12	398	888	0.45	0.11	36.4	0.33253	0.27487	0.00602	0.00328	0.000131	0.000030	0.59	0.19		0.65	0.32	
SP4-13	63	81	0.78	0.20	60.5	0.52167	0.54214	0.01234	0.02256	0.000172	0.000187	0.46	1.21		1.19	1.21	
SP4-14	345	450	0.77	0.19	15.2	0.16547	0.50678	0.00276	0.00716	0.000121	0.000035	0.72	0.23		0.76	0.53	
SP4-15	*152*	*328*	*0.46*	*0.12*	*89.4*	*0.74842*	*0.16257*	*0.03487*	*0.01080*	*0.000338*	*0.000060*	*0.24*	*0.39*		*2.28*	*0.39*	
SP4-16	604	812	0.74	0.19	-13.1	-0.05653	0.18015	-0.00122	0.00289	0.000157	0.000041	1.08	0.26		1.10	0.26	
SP4-17	269	440	0.61	0.15	23.1	0.22741	0.36875	0.00335	0.00561	0.000107	0.000032	0.59	0.21		0.63	0.35	
SP4-18	*109*	*110*	*0.99*	*0.25*	*646.3*	*5.12520*	*11.88084*	*0.00712*	*0.02005*	*0.000010*	*0.000176*	*-0.71*	*1.14*		*0.12*	*1.16*	
SP4-19	204	446	0.46	0.11	21.2	0.21309	0.13287	0.00536	0.00358	0.000183	0.000032	0.99	0.21		1.04	0.24	
SP4-20	847	1,366	0.62	0.15	3.9	0.07688	0.23687	0.00112	0.00212	0.000106	0.000029	0.72	0.18		0.76	0.25	
										Weighted mean (n=14)		*0.62*	*0.10*	*3.8*			
										Weighted mean (n=15)					*0.64*	*0.10*	*3.5*
Plešovice (reference age: 337.13 ± 0.37 Ma; Sláma et al., 2008) measured during the analytical session with 30μm or 40μm laser beam.																	
P3-1-193	101	831	0.12		0.8	0.05225	0.00105	0.3949	0.0145	0.05484	0.00187	341.52	12.02		344.25	11.44	
P3-1-194	108	740	0.15		0.7	0.05192	0.00042	0.3913	0.0075	0.05469	0.00096	340.78	6.20		343.36	5.92	
P3-1-195	114	815	0.14		0.7	0.05160	0.00076	0.3855	0.0066	0.05420	0.00098	337.96	6.30		340.39	6.02	
P3-1-196	119	894	0.13		0.7	0.05154	0.00055	0.3725	0.0196	0.05244	0.00276	327.27	17.77		329.60	16.94	
P3-1-197	86	678	0.13		0.8	0.05219	0.00098	0.3827	0.0084	0.05320	0.00077	331.61	4.99		334.24	4.78	
P3-1-198	221	1,255	0.18		3.3	0.07168	0.00103	0.5401	0.0154	0.05467	0.00122	332.26	7.85		343.26	7.48	
P3-1-199	90	758	0.12		0.7	0.05172	0.00104	0.3710	0.0128	0.05205	0.00178	324.78	11.49		327.17	10.96	
P3-1-209	97	883	0.11		0.6	0.05106	0.00136	0.3762	0.0145	0.05347	0.00177	333.72	11.42		335.89	10.87	
P3-1-210	112	1,008	0.11		0.7	0.05165	0.00181	0.3810	0.0172	0.05352	0.00115	333.77	7.40		336.19	7.06	
P3-1-211	115	994	0.12		0.6	0.05080	0.00246	0.3664	0.0180	0.05233	0.00118	326.90	7.63		328.92	7.29	
P3-1-212	105	967	0.11		0.4	0.04959	0.00118	0.3709	0.0158	0.05427	0.00187	339.20	12.04		340.79	11.46	
P3-1-213	93	867	0.11		6.9	0.10061	0.00395	0.7492	0.0678	0.05404	0.00390	316.29	25.12		339.36	23.93	
P3-1-214	158	1,169	0.14		4.3	0.07974	0.00861	0.5777	0.0591	0.05257	0.00085	316.51	5.50		330.41	5.26	
P3-1-306	136	1,033	0.13		1.5	0.05812	0.00109	0.4332	0.0140	0.05409	0.00137	334.52	8.81		339.69	8.39	
P3-1-307	263	1,331	0.20		0.8	0.05250	0.00138	0.3966	0.0094	0.05480	0.00109	341.22	7.02		344.06	6.69	
P3-1-308	192	1,271	0.15		0.8	0.05213	0.00089	0.3873	0.0067	0.05390	0.00037	335.89	2.41		338.53	2.37	
P3-1-309	173	1,266	0.14		0.8	0.05230	0.00090	0.3916	0.0115	0.05433	0.00154	338.43	9.93		341.16	9.45	
P3-1-310	160	1,115	0.14		0.8	0.05263	0.00138	0.4011	0.0133	0.05530	0.00203	344.19	13.09		347.11	12.44	
P3-1-311	199	1,222	0.16		2.6	0.06652	0.00111	0.4912	0.0077	0.05358	0.00043	327.94	2.76		336.57	2.69	
P3-1-312	131	1,005	0.13		0.7	0.05176	0.00091	0.3875	0.0075	0.05431	0.00094	338.55	6.09		341.05	5.81	
P3-2-476	33	425	0.08		1.4	0.05713	0.00309	0.4269	0.0243	0.05422	0.00134	335.73	8.63		340.49	8.22	
P3-2-477	89	535	0.17		2.6	0.06656	0.00191	0.4908	0.0167	0.05350	0.00131	327.46	8.44		336.10	8.05	
P3-2-478	84	723	0.12		0.8	0.05202	0.00076	0.3739	0.0188	0.05215	0.00226	325.32	14.58		327.84	13.90	
P3-2-479	68	594	0.11		0.9	0.05329	0.00125	0.3969	0.0110	0.05403	0.00094	336.20	6.05		339.34	5.78	
P3-2-480	36	416	0.09		1.0	0.05365	0.00252	0.3880	0.0234	0.05247	0.00159	326.59	10.27		329.79	9.79	
										Weighted mean without no. 214 (n=25)		*333.60*	*2.00*	*2.4*			
										Weighted mean (n=25)					*337.60*	*1.70*	*1.8*

[a] $f_{Th/U} = (Th/U)_{zircon}/(Th/U)_{magma}$. $(Th/U)_{magma}$ of 4.0 was used.

[b] f_{206}% denotes the percentage of ^{206}Pb that is common Pb (Ito, 2014).

[c] Error of weighted mean is shown as 95% confidence level.

[d] MSWD: mean square weighted deviation.

Age (#2) and age (#3) are calculated according to Ito et al. (2017a) and Sakata (2018), respectively.