Electronic Supplementary Material (ESI) for Journal of Analytical Atomic Spectrometry.

Table ESI 1: LA-ICP-MS Data

1.Feb. 2013, Departement of earth sciences, ETH Zürich, Switzerland

Identifier	Comment	Integration length seconds	204 cps	206 cps	207 cps	Approx. U ppm	Th/U	Th/U 1 SE abs	Final 207/235	Final 207/235 Prop 2SE	Final 206/238	Final 206/238 Prop 2SE	Error Correlation 206/238 vs 207/235	Final 207/206	Final 207/206 Prop 2SE	Final 208/232	Final 208/232 Prop 2SE	FinalAge 207/235	FinalAge 207/235 Prop 2SE	FinalAge 206/238	FinalAge 206/238 Prop 2SE	FinalAge 208/232	FinalAge 208/232 Prop 2SE	Th/U magma	f (Th/U)	**Th disequilibrium corrected Age (equation 3)**	**Error Prop 2SE (equation 3)**	Th disequilibrium corrected Age (equation 1)	Error Prop 2SE (equation 1)
KPT04-36-Grain 1	Analysis 1	31.4	59	55.1	2.5	212	0.38	0.01	0.00038	0.00042	0.0000437	0.0000061	-0.160	0.04	0.13	0.00003	0.000021	0.38	0.42	0.281	0.04	0.61	0.42	3.3	0.116	**370000**	**49000**	380000	53000
KPT04-36-Grain 1	Analysis 2	31.6	-4	52.4	11.3	218	0.41	0.01	0.00115	0.0005	0.000041	0.0000065	-0.052	0.09	0.18	0.00005	0.000023	1.16	0.51	0.264	0.042	1.01	0.47	3.3	0.123	**360000**	**53000**	360000	57000
KPT04-36-Grain 2		29.6	81	79	18	488	1.35	0.04	0.00091	0.00028	0.0000275	0.0000037	-0.012	0.19	0.15	0.0000185	0.0000044	0.93	0.28	0.178	0.024	0.374	0.088	3.3	0.408	**230000**	**54000**	240000	33000
KPT04-36-Grain 3		34.4	100	135	21.5	661	0.73	0.01	0.0007	0.00021	0.0000346	0.0000034	0.121	0.179	0.077	0.0000133	0.0000048	0.71	0.22	0.223	0.022	0.27	0.098	3.3	0.221	**300000**	**39000**	310000	30000
KPT04-36-Grain 4		19.1	202	113	19.7	578	0.94	0.02	0.00096	0.00033	0.0000345	0.0000052	0.076	0.27	0.13	0.000025	0.0000063	0.97	0.34	0.222	0.033	0.51	0.13	3.3	0.285	**290000**	**56000**	300000	45000
KPT04-36-Grain 5	Analysis 1	34.8	166	93	18.2	583	0.52	0.01	0.00072	0.00023	0.000028	0.0000041	-0.041	0.14	0.12	0.0000207	0.0000065	0.73	0.23	0.181	0.026	0.42	0.13	3.3	0.159	**260000**	**40000**	270000	40000
KPT04-36-Grain 5	Analysis 2, Integration 1	7.9	190	61	21	612	0.57	0.02	0.001	0.0006	0.0000182	0.0000054	0.119	0.53	0.44	0.000024	0.000017	1.02	0.6	0.117	0.035	0.48	0.34	3.3	0.171	**191900**	**54000**	210000	62000
KPT04-36-Grain 5	Analysis 2, Integration 2	9.2	95	123	31	517	0.53	0.01	0.00146	0.00064	0.0000347	0.0000069	0.136	0.31	0.2	0.000042	0.000016	1.48	0.65	0.224	0.044	0.85	0.32	3.3	0.160	**310000**	**59000**	320000	63000
KPT04-36-Grain 6		31.8	83	119	21.3	748	0.58	0.02	0.00065	0.00017	0.0000261	0.0000026	0.074	0.216	0.088	0.000018	0.000005	0.66	0.17	0.168	0.017	0.364	0.1	3.3	0.176	**250000**	**31000**	260000	26000
KPT04-36-Grain 7		12.2	63	125	23.6	709	0.58	0.01	0.00101	0.00041	0.0000337	0.0000057	0.180	0.22	0.12	0.000028	0.000011	1.02	0.42	0.217	0.037	0.57	0.23	3.3	0.175	**300000**	**51000**	310000	52000
KPT04-36-Grain 8		9.5	160	109	7	747	0.70	0.04	0.00023	0.00021	0.0000272	0.0000059	0.041	0.05	0.13	0.0000166	0.0000085	0.24	0.22	0.176	0.038	0.33	0.17	3.3	0.212	**250000**	**59000**	260000	57000
KPT04-36-Grain 9	Analysis 1	6.9	190	90	11	778	0.64	0.05	0.00036	0.00034	0.0000211	0.0000053	0.287	0.11	0.2	0.000011	0.00001	0.37	0.34	0.136	0.034	0.22	0.2	3.3	0.194	**210000**	**55000**	220000	56000
KPT04-36-Grain 9	Analysis 2	7.9	176	87	22	702	0.64	0.04	0.00069	0.00035	0.000024	0.0000046	0.178	0.19	0.13	0.000045	0.000016	0.7	0.36	0.155	0.03	0.9	0.33	3.3	0.195	**230000**	**49000**	240000	46000
KPT04-36-Grain 10	Integration 1	12.9	175	210	44	819	3.27	0.04	0.00133	0.0004	0.0000454	0.0000041	-0.127	0.244	0.074	0.0000166	0.0000029	1.35	0.4	0.293	0.027	0.336	0.059	3.3	0.992	**290000**	**91000**	290000	27000
KPT04-36-Grain 10	Integration 2	15.2	157	125	19.3	611	2.43	0.09	0.0006	0.00026	0.0000315	0.0000036	-0.066	0.24	0.1	0.000015	0.000004	0.61	0.27	0.203	0.023	0.303	0.08	3.3	0.736	**230000**	**74000**	230000	27000
KPT04-36-Grain 11		4.9	150	271	33	1557	0.69	0.01	0.00055	0.00032	0.0000339	0.0000055	0.417	0.133	0.077	0.0000238	0.0000088	0.56	0.32	0.218	0.036	0.48	0.18	3.3	0.208	**300000**	**52000**	310000	49000
KPT04-36-Grain 12	*Integration 1, few common-Pb*	*7.5*	*134*	*144*	*48*	*609*	*0.55*	*0.01*	*0.002*	*0.00063*	*0.0000451*	*0.0000087*	*0.013*	*0.48*	*0.19*	*0.000044*	*0.000019*	*2.03*	*0.64*	*0.291*	*0.056*	*0.89*	*0.39*	*3.3*	*0.167*	***380000***	***70000***	*380000*	*74000*
KPT04-36-Grain 12	Integration 2 (inherited Core)	6.0	160	5.60E+05	9.63E+04	450	0.36	0.02	4.32	0.41	0.181	0.016	0.975	0.1725	0.0043	0.0251	0.0033	1677	82	1067	87	500	66	3.3	0.111	**1072500000**	**89000000**	1072500000	95000000
KPT04-36-Grain 13	Analysis 1	33.3	130	119	16.8	715	1.23	0.09	0.00051	0.00018	0.0000271	0.0000023	-0.056	0.165	0.072	0.0000147	0.0000034	0.51	0.18	0.175	0.015	0.298	0.07	3.3	0.374	**230000**	**46000**	240000	21000
KPT04-36-Grain 13	Analysis 2	18.1	64	104	13.9	630	1.66	0.02	0.00047	0.00023	0.000027	0.0000036	-0.016	0.124	0.094	0.0000129	0.0000032	0.48	0.23	0.174	0.023	0.261	0.065	3.3	0.504	**220000**	**58000**	230000	30000
KPT04-24-Grain 3		32.6	154	190	25.8	1680	0.62	0.01	0.000347	0.000082	0.0000181	0.0000016	0.011746	0.252	0.074	0.0000101	0.0000025	0.353	0.084	0.117	0.011	0.205	0.05	3.3	0.189	**189300**	**25000**	210000	18000
KPT04-24-Grain 4		31.4	124	94	13.5	582	0.55	0.01	0.00048	0.00018	0.0000267	0.0000033	-0.069282	0.3	0.13	0.0000233	0.0000074	0.48	0.18	0.172	0.022	0.47	0.15	3.3	0.167	**250000**	**35000**	260000	33000
KPT04-24-Grain 5		8.4	120	110	19	742	0.61	0.04	0.00052	0.00033	0.000028	0.0000071	0.041397	0.12	0.33	0.000024	0.000011	0.53	0.33	0.181	0.046	0.48	0.23	3.3	0.186	**260000**	**65000**	270000	68000
KPT04-24-Grain 6		31.2	174	22.5	10.3	147	0.50	0.01	0.0014	0.0007	0.0000228	0.0000066	0.070643	0.07	0.26	0.000076	0.000031	1.41	0.71	0.147	0.042	1.54	0.62	3.3	0.151	**230000**	**60000**	240000	69000
KPT04-24-Grain 7	Analysis 1	31.2	70	82	14.4	600	0.57	0.02	0.00059	0.00023	0.0000231	0.0000031	0.0095692	0.24	0.15	0.000017	0.0000064	0.6	0.23	0.149	0.02	0.34	0.13	3.3	0.172	**230000**	**35000**	240000	32000
KPT04-24-Grain 7	Analysis 2	29.7	59	91	17.1	666	0.58	0.02	0.00057	0.00021	0.0000231	0.0000032	0.020432	0.19	0.13	0.0000135	0.0000058	0.58	0.21	0.149	0.021	0.27	0.12	3.3	0.175	**230000**	**36000**	240000	33000
KPT04-24-Grain 8	Analysis 1	13.3	180	83	11.3	512	0.71	0.02	0.00063	0.00043	0.0000297	0.0000065	0.15828	0.04	0.16	0.000014	0.00001	0.64	0.43	0.192	0.042	0.28	0.21	3.3	0.215	**270000**	**61000**	280000	61000
KPT04-24-Grain 8	Analysis 2	33.7	118	115	15.9	649	0.75	0.06	0.00062	0.00025	0.0000278	0.0000034	0.096397	0.08	0.13	0.0000159	0.0000051	0.63	0.25	0.179	0.022	0.32	0.1	3.3	0.226	**260000**	**43000**	260000	32000
KPT04-24-Grain 9	Analysis 1	12.0	159	78	21.4	711	0.51	0.01	0.00071	0.0003	0.0000215	0.000005	-0.081694	0.18	0.41	0.000023	0.00001	0.72	0.3	0.139	0.032	0.46	0.21	3.3	0.153	**220000**	**48000**	230000	54000
KPT04-24-Grain 9	Analysis 2	32.7	87	117	21.3	808	0.53	0.01	0.0006	0.00014	0.0000233	0.0000022	-0.082725	0.265	0.09	0.0000124	0.0000041	0.61	0.15	0.15	0.014	0.25	0.082	3.3	0.162	**230000**	**27000**	240000	23000
KPT04-24-Grain 10		31.2	150	68.9	10.7	471	0.75	0.06	0.00058	0.00023	0.0000254	0.0000033	0.043639	0.23	0.14	0.000012	0.0000055	0.58	0.23	0.163	0.021	0.24	0.11	3.3	0.226	**240000**	**42000**	250000	32000
KPT04-24-Grain 11	Analysis 1	33.3	147	201	27.9	1378	0.75	0.01	0.00042	0.000094	0.0000246	0.0000019	0.028491	0.19	0.057	0.0000124	0.0000027	0.426	0.096	0.159	0.013	0.25	0.055	3.3	0.226	**230000**	**29000**	240000	19000
KPT04-24-Grain 11	Analysis 2	14.4	98	171	27.2	905	0.58	0.01	0.00062	0.00018	0.0000283	0.0000035	-0.075496	0.202	0.091	0.0000222	0.0000069	0.62	0.19	0.182	0.023	0.45	0.14	3.3	0.176	**260000**	**37000**	270000	34000
Plesovice 1	Secondary SRM	34.1	152	157800	8340	475	0.097	0.001	0.3955	0.01	0.05397	0.00074	-0.025523	0.05319	0.0013	0.0169	0.00081	338	7.6	338.8	4.5	339.2	16						
Plesovice 2	Secondary SRM	34.1	-39	154700	8260	463	0.099	0.001	0.4009	0.01	0.05388	0.00073	0.2155	0.0536	0.0011	0.0167	0.0008	342	7.2	338.3	4.5	334.1	16						
Plesovice 3	Secondary SRM	34.1	56	180000	9500	542	0.098	0.001	0.397	0.0099	0.05385	0.00073	0.17636	0.05338	0.0012	0.0170	0.00079	339.2	7.2	338.1	4.4	340.2	16						
Plesovice 4	Secondary SRM	16.1	-48	167300	8880	543	0.112	0.001	0.3969	0.011	0.05404	0.00082	0.25238	0.05312	0.0013	0.0160	0.00081	340	7.6	339.3	5	321.7	16						
Plesovice 5	Secondary SRM	15.0	-48	124900	6670	340	0.107	0.001	0.4079	0.011	0.05458	0.00083	0.38283	0.05333	0.0013	0.0168	0.00088	347.2	8.2	342.6	5	337	17						
Temora 1	Secondary SRM	34.1	28	23730	1340	57	0.400	0.003	0.524	0.019	0.06691	0.001	0.001698	0.0567	0.0019	0.0209	0.001	429.1	12	418.2	6.2	418	20						
Temora 2	Secondary SRM	34.1	110	36900	2085	90	0.426	0.005	0.526	0.018	0.06711	0.00099	0.23158	0.0574	0.0017	0.0207	0.00095	430.5	12	418.7	6	414.1	19						
Temora 3	Secondary SRM	34.1	145	36400	2029	90	0.310	0.003	0.525	0.017	0.06701	0.00098	0.076547	0.0561	0.0017	0.0209	0.001	427.9	12	418.4	5.8	417	20						
Temora 4	Secondary SRM	34.1	95	107300	5850	264	0.396	0.004	0.5112	0.013	0.06737	0.00096	0.16125	0.05481	0.0013	0.0202	0.00092	419.4	8.7	420.3	5.8	405	18						
Temora 5	Secondary SRM	34.1	42	41900	2302	101	0.342	0.002	0.518	0.016	0.06772	0.00097	0.12598	0.0556	0.0015	0.0214	0.0011	424	10	422.3	5.9	427	21						
GJ-1 1	Primary SRM	34.1	11	198000	11890	328	0.0347	0.0003	0.8107	0.02	0.09729	0.0013	0.17815	0.06069	0.0013	0.0304	0.0017	602.3	11	598.5	7.8	605	33						
GJ-1 2	Primary SRM	34.1	-22	193100	11560	317	0.0326	0.0003	0.8034	0.02	0.09761	0.0013	0.24302	0.05979	0.0012	0.0307	0.0016	598.7	11	600.4	7.7	611	31						
GJ-1 3	Primary SRM	34.1	10	194800	11740	319	0.0346	0.0003	0.8201	0.02	0.09791	0.0013	0.20802	0.06089	0.0012	0.0296	0.0016	608.2	11	602.1	7.7	589	31						
GJ-1 4	Primary SRM	34.1	-46	195900	11840	328	0.0349	0.0003	0.8149	0.02	0.09757	0.0013	0.3093	0.06048	0.0013	0.0312	0.0016	605.2	11	600.1	7.7	621	32						
GJ-1 5	Primary SRM	34.1	61	191400	11300	321	0.0325	0.0003	0.7925	0.019	0.09715	0.0013	0.18273	0.05928	0.0013	0.0288	0.0017	592.1	11	597.7	7.5	573	33						
GJ-1 6	Primary SRM	34.1	77	191000	11310	316	0.0330	0.0003	0.8056	0.02	0.09824	0.0013	0.21079	0.05913	0.0012	0.0298	0.0017	599.9	11	604	7.8	592	34						
GJ-1 7	Primary SRM	34.1	-18	189700	11420	318	0.0327	0.0003	0.8153	0.02	0.0976	0.0013	0.23205	0.06074	0.0013	0.0298	0.0016	604.9	11	600.3	7.8	593	32						
GJ-1 8	Primary SRM	34.1	-19	188800	11310	314	0.0331	0.0003	0.8221	0.02	0.09867	0.0013	0.1111	0.06022	0.0013	0.0301	0.0017	608.8	11	606.6	7.9	599	33						
GJ-1 9	Primary SRM	34.1	54	188700	11310	321	0.0329	0.0003	0.7987	0.02	0.09659	0.0013	0.13222	0.0602	0.0013	0.0303	0.0017	596.1	11	594.4	7.7	603	33						
GJ-1 10	Primary SRM	34.1	-8	196300	11550	325	0.0349	0.0003	0.8089	0.02	0.09827	0.0013	0.21344	0.05969	0.0012	0.0294	0.0016	602.3	11	604.2	7.7	586	31						
GJ-1 11	Primary SRM	34.1	-6	194800	11630	326	0.0331	0.0003	0.8108	0.02	0.09755	0.0013	0.16373	0.06037	0.0013	0.0302	0.0016	602.8	11	600	7.6	601	31						
GJ-1 12	Primary SRM	34.1	83	191200	11440	322	0.0330	0.0003	0.802	0.019	0.09691	0.0013	0.1997	0.06006	0.0012	0.0294	0.0016	598	11	596.2	7.8	585	32						
GJ-1 13	Primary SRM	34.1	-54	189900	11270	313	0.0332	0.0003	0.8119	0.02	0.09824	0.0013	0.20282	0.06000	0.0013	0.0301	0.0016	603	11	604.1	7.6	599	31						
GJ-1 14	Primary SRM	34.1	-12	196000	11680	326	0.0355	0.0003	0.809	0.02	0.09763	0.0013	0.041314	0.05995	0.0013	0.0310	0.0018	601.4	12	600.5	7.6	617	35						
GJ-1 15	Primary SRM	34.1	-3	191500	11510	321	0.0332	0.0003	0.8117	0.02	0.09683	0.0013	0.37221	0.06071	0.0012	0.0310	0.0019	603.5	11	595.8	7.7	616	37						

17. April 2013, Departement of earth sciences, ETH Zürich, Switzerland

Identifier	Comment	Integration length seconds	204 cps	206 cps	207 cps	Approx. U ppm	Th/U	Th/U 1 SE abs	Final 207/235	Final 207/235 Prop 2SE	Final 206/238	Final 206/238 Prop 2SE	Error Correlation 206/238 vs 207/235	Final 207/206	Final 207/206 Prop 2SE	Final 208/232	Final 208/232 Prop 2SE	FinalAge 207/235	FinalAge 207/235 Prop 2SE	FinalAge 206/238	FinalAge 206/238 Prop 2SE	FinalAge 208/232	FinalAge 208/232 Prop 2SE	Th/U magma	f (Th/U)	**Th disequilibrium corrected Age (equation 3)**	**Error Prop 2SE (equation 3)**	Th disequilibrium corrected Age (equation 1)	Error Prop 2SE (equation 1)
KPT04-36-Grain 1	Integration 1	34.2	135	36.9	3.7	163	0.3079	0.0064	0.00056	0.00069	0.0000425	0.0000062	-0.22289	0.51	0.34	0.000061	0.000034	0.56	0.7	0.274	0.04	1.22	0.68	3.3	0.093	**370000**	**48000**	370000	54000
KPT04-36-Grain 1	Integration 2	10.4	210	261	12	2579	1.1682	0.0218	0.00023	0.00012	0.0000193	0.0000018	0.21118	0.082	0.052	0.0000098	0.0000022	0.23	0.12	0.124	0.012	0.198	0.045	3.3	0.354	**181300**	**37000**	195000	18000
KPT04-36-Grain 1b		19.1	134	194	8.8	2060	1.3441	0.0199	0.000189	0.00011	0.0000166	0.0000013	0.097632	0.078	0.04	0.0000084	0.0000016	0.192	0.11	0.1073	0.0084	0.169	0.032	3.3	0.407	**156000**	**35000**	171700	13000
KPT04-36-Grain 2		32.9	90	32.9	3.7	194	0.6925	0.0177	0.00045	0.00058	0.0000339	0.0000048	0.089801	0.28	0.22	0.0000161	0.0000091	0.45	0.59	0.219	0.031	0.33	0.18	3.3	0.210	**300000**	**48000**	300000	43000
KPT04-36-Grain 3		17.0	180	210	13	1209	0.7463	0.0111	0.00055	0.00026	0.0000296	0.0000024	0.137	0.13	0.064	0.0000179	0.0000044	0.55	0.26	0.191	0.015	0.362	0.088	3.3	0.226	**270000**	**32000**	280000	22000
KPT04-36-Grain 3b		32.4	14	118.4	7	853	0.5967	0.0256	0.00051	0.0002	0.0000247	0.000002	0.078175	0.162	0.073	0.000025	0.0000058	0.51	0.2	0.159	0.013	0.5	0.12	3.3	0.181	**240000**	**28000**	250000	20000
KPT04-36-Grain 4		35.1	136	114	5.9	570	0.7179	0.0149	0.00035	0.00027	0.0000381	0.0000033	-0.0076206	0.094	0.092	0.0000178	0.0000059	0.36	0.27	0.246	0.021	0.36	0.12	3.3	0.218	**330000**	**38000**	330000	29000
KPT04-36-Grain 5		30.7	193	100	6.9	650	0.4505	0.0079	0.00063	0.00033	0.0000313	0.0000025	-0.070341	0.19	0.12	0.0000216	0.0000074	0.64	0.33	0.202	0.016	0.44	0.15	3.3	0.137	**290000**	**27000**	300000	24000
KPT04-36-Grain 10	Integration 1	19.3	98	84	7.5	852	0.4384	0.0156	0.00031	0.00024	0.0000195	0.0000024	-0.13296	0.2	0.16	0.0000107	0.0000053	0.32	0.24	0.126	0.016	0.22	0.11	3.3	0.133	**210000**	**28000**	220000	27000

Identifier	Comment	Integration length seconds	204 cps	206 cps	207 cps	Approx. U ppm	Th/U	Th/U 1 SE abs	Final 207/235	Final 207/235 Prop 2SE	Final 206/238	Final 206/238 Prop 2SE	Error Correlation 206/238 vs 207/235	Final 207/206	Final 207/206 Prop 2SE	Final 208/232	Final 208/232 Prop 2SE	FinalAge 207/235	FinalAge 207/235 Prop 2SE	FinalAge 206/238	FinalAge 206/238 Prop 2SE	FinalAge 208/232	FinalAge 208/232 Prop 2SE	Th/U magma	f (Th/U)	**Th disequilibrium corrected Age (equation 3)**	**Error Prop 2SE (equation 3)**	Th disequilibrium corrected Age (equation 1)	Error Prop 2SE (equation 1)
KPT04-36-Grain 10	Integration 2 (inherited Core)	2.5	190	4.38E+05	1.80E+04	201	0.3584	0.0193	15.3	2.4	0.363	0.056	0.9818	0.3066	0.01	0.1	0.015	2820	150	1990	260	1920	280	3.3	0.109	**1996000000**	**270000000**	1996000000	310000000
KPT04-36-Grain 9		8.2	200	92	12	741	0.7402	0.0263	0.00027	0.00039	0.000025	0.0000051	0.037642	0.17	0.17	0.0000109	0.0000077	0.27	0.39	0.161	0.033	0.22	0.16	3.3	0.224	**240000**	**53000**	250000	50000
KPT04-36-Grain 12		24.2	125	65.8	4.5	485	0.4042	0.0091	0.00025	0.00025	0.0000256	0.000003	-0.12434	0.12	0.13	0.0000191	0.00001	0.25	0.26	0.165	0.019	0.39	0.2	3.3	0.122	**250000**	**30000**	260000	31000
KPT04-36-Grain 12b		17.6	160	309	20	1732	1.9231	0.0740	0.00079	0.00031	0.0000341	0.0000022	0.18531	0.164	0.063	0.0000164	0.0000021	0.8	0.31	0.22	0.014	0.331	0.043	3.3	0.583	**260000**	**56000**	270000	17000
KPT04-36-Grain 12c	Integration 1 *	9.9	90	109	15	1061	0.4398	0.0027	0.00068	0.0004	0.0000206	0.0000029	0.16175	0.21	0.14	0.000014	0.000011	0.69	0.41	0.133	0.019	0.28	0.21	3.3	0.133	**210000**	**31000**	230000	32000
KPT04-36-Grain 12c	Integration 2 *	21.9	161	523	13	3290	0.9259	0.0386	0.00041	0.00011	0.0000292	0.0000012	-0.063935	0.105	0.028	0.000016	0.0000021	0.42	0.11	0.1882	0.0075	0.324	0.043	3.3	0.281	**260000**	**29000**	270000	11000
KPT04-36-Grain 13		19.8	240	116	8.4	1074	0.4355	0.0044	0.00036	0.00019	0.0000207	0.0000025	0.016064	0.131	0.076	0.0000133	0.0000055	0.37	0.19	0.134	0.016	0.27	0.11	3.3	0.132	**210000**	**28000**	230000	28000
KPT04-36-Grain 14		36.3	108	124	6.1	800	0.5476	0.0291	0.00064	0.0003	0.0000302	0.0000026	-0.0016555	0.173	0.09	0.0000139	0.0000055	0.65	0.3	0.195	0.017	0.28	0.11	3.3	0.166	**280000**	**31000**	290000	25000
KPT04-36-Grain 15		36.3	15	129	6.5	1014	0.4808	0.0146	0.0006	0.00018	0.0000231	0.0000014	0.1005	0.21	0.068	0.0000131	0.0000036	0.61	0.18	0.1486	0.0091	0.265	0.074	3.3	0.146	**230000**	**21000**	240000	15000
KPT04-36-Grain 16		20.8	162	107	7.2	982	0.4163	0.0043	0.00043	0.00019	0.0000208	0.0000021	-0.026046	0.199	0.081	0.0000157	0.0000068	0.44	0.2	0.134	0.013	0.32	0.14	3.3	0.126	**220000**	**24000**	230000	23000
KPT04-36-Grain 17		13.6	270	57	7.8	393	1.1274	0.0153	0.00084	0.00054	0.0000285	0.0000055	0.32953	0.26	0.17	0.0000116	0.0000064	0.85	0.55	0.184	0.036	0.23	0.13	3.3	0.342	**250000**	**61000**	260000	49000
KPT04-36-Grain 18		35.7	214	164	6.5	976	0.5935	0.0067	0.00051	0.00017	0.0000301	0.0000018	-0.19778	0.139	0.048	0.0000152	0.0000039	0.52	0.18	0.194	0.012	0.308	0.079	3.3	0.180	**280000**	**25000**	280000	17000
KPT04-36-Grain 19		35.7	7	194	8.1	997	1.3643	0.0447	0.00065	0.00017	0.000034	0.0000021	0.25008	0.163	0.041	0.0000179	0.0000023	0.66	0.17	0.219	0.014	0.362	0.047	3.3	0.413	**280000**	**44000**	280000	17000
KPT04-24-Grain 1	Analysis 1	3.4	10	61	25	467	0.7027	0.0119	0.0018	0.0014	0.0000275	0.000007	0.18724	0.28	0.3	0.000016	0.000012	1.8	1.5	0.177	0.045	0.32	0.24	3.3	0.213	**250000**	**65000**	260000	67000
KPT04-24-Grain 1	Analysis 2	33.8	63	51.4	5.6	312	0.6527	0.0153	0.00117	0.00052	0.0000343	0.0000044	0.057498	0.37	0.16	0.0000161	0.0000093	1.18	0.52	0.221	0.028	0.32	0.19	3.3	0.198	**300000**	**44000**	310000	40000
KPT04-24-Grain 2	Analysis 1 (rim)	36.1	49	93.6	5.6	854	0.4219	0.0032	0.00049	0.00017	0.0000199	0.0000016	-0.013058	0.214	0.074	0.0000115	0.0000048	0.5	0.17	0.128	0.01	0.233	0.098	3.3	0.128	**210000**	**21000**	220000	18000
KPT04-24-Grain 2	Analysis 2 (core), Integration 1	18.4	190	119	10	890	0.4411	0.0078	0.00065	0.00028	0.0000258	0.0000024	0.21613	0.212	0.086	0.000015	0.0000074	0.66	0.29	0.166	0.015	0.3	0.15	3.3	0.134	**250000**	**26000**	260000	24000
KPT04-24-Grain 2	Analysis 2 (core), Integration 2	3.9	180	133	8.9	443	0.5376	0.0260	0.0002	0.00058	0.0000527	0.0000096	0.054599	0.022	0.071	0.000062	0.000032	0.2	0.58	0.34	0.062	1.26	0.65	3.3	0.163	**430000**	**76000**	430000	79000
KPT04-24-Grain 2	Analysis 2 (core), Integration 3	10.4	90	62	12	383	0.6536	0.0085	0.0014	0.00076	0.0000274	0.000005	-0.36761	0.64	0.41	0.000015	0.000012	1.41	0.77	0.176	0.032	0.3	0.25	3.3	0.198	**260000**	**49000**	260000	48000
KPT04-24-Grain 3		15.4	90	209	17	2100	0.6536	0.0470	0.00057	0.00025	0.0000216	0.0000015	0.28686	0.212	0.088	0.0000141	0.0000049	0.58	0.25	0.1395	0.0096	0.284	0.1	3.3	0.198	**210000**	**27000**	230000	16000
KPT04-24-Grain 4	Analysis 1	28.5	139	129	7.1	811	0.4325	0.0052	0.00056	0.00021	0.0000279	0.0000025	-0.27538	0.168	0.068	0.0000134	0.0000051	0.57	0.21	0.18	0.016	0.27	0.1	3.3	0.131	**270000**	**27000**	270000	25000
KPT04-24-Grain 4	Analysis 2	33.1	140	110	6.1	758	0.4995	0.0132	0.00069	0.00024	0.0000264	0.000003	0.063694	0.27	0.1	0.0000241	0.0000071	0.69	0.24	0.17	0.019	0.49	0.14	3.3	0.151	**250000**	**32000**	260000	30000
KPT04-24-Grain 5	Analysis 1	21.7	0	91	7.7	596	0.7097	0.0191	0.00049	0.00031	0.0000292	0.0000037	-0.082899	0.17	0.11	0.0000113	0.000006	0.49	0.32	0.189	0.024	0.23	0.12	3.3	0.215	**270000**	**41000**	270000	35000
KPT04-24-Grain 5	Analysis 2	15.3	-50	96	9	794	0.4468	0.0052	0.00074	0.00027	0.0000208	0.0000024	-0.13966	0.36	0.14	0.0000283	0.0000083	0.76	0.27	0.134	0.016	0.57	0.17	3.3	0.135	**210000**	**27000**	230000	26000
KPT04-24-Grain 5b		29.9	84	30.3	3.3	202	0.9588	0.0138	0.00053	0.00042	0.000028	0.0000056	-0.20996	0.14	0.16	0.0000104	0.000008	0.54	0.42	0.18	0.036	0.21	0.16	3.3	0.291	**250000**	**59000**	260000	52000
KPT04-24-Grain 7	Analysis 1, Integration 1	36.8	47	92.3	10	661	0.4148	0.0150	0.00104	0.0004	0.0000264	0.0000028	0.66794	0.32	0.13	0.0000205	0.000008	1.05	0.4	0.17	0.018	0.41	0.16	3.3	0.126	**260000**	**29000**	270000	28000
KPT04-24-Grain 7	Analysis 1, Integration 2	10.1	100	79	14	755	0.3870	0.0070	0.00029	0.00037	0.0000193	0.0000034	0.050558	0.21	0.22	6.00E-06	5.80E-06	0.29	0.38	0.124	0.022	0.01	0.12	3.3	0.117	**210000**	**34000**	220000	39000
KPT04-24-Grain 7	Analysis 1, Integration 3	9.3	20	82	11	468	0.4554	0.0149	0.00064	0.00055	0.00003	0.0000044	-0.43461	0.3	0.25	0.000016	0.000011	0.65	0.56	0.193	0.028	0.32	0.21	3.3	0.138	**280000**	**41000**	290000	42000
KPT04-24-Grain 7	Analysis 2, Integration 1	20.5	136	79.1	9.4	807	0.3968	0.0049	0.00079	0.0003	0.0000189	0.000002	0.026294	0.35	0.15	0.0000183	0.0000085	0.8	0.31	0.122	0.013	0.37	0.17	3.3	0.120	**200000**	**23000**	220000	23000
KPT04-24-Grain 7	Analysis 2, Integration 2	13.0	20	76	10	514	0.4329	0.0127	0.0009	0.00058	0.0000239	0.0000048	0.093688	0.19	0.12	0.000019	0.000012	0.91	0.59	0.154	0.031	0.38	0.25	3.3	0.131	**240000**	**45000**	250000	50000
KPT04-24-Grain 7b		10.0	299	167	23	1045	0.7386	0.0447	0.00077	0.00046	0.0000277	0.0000035	-0.021859	0.19	0.12	0.0000119	0.0000059	0.78	0.46	0.179	0.022	0.24	0.12	3.3	0.224	**250000**	**42000**	260000	33000
KPT04-24-Grain 8		27.2	169	158	9.9	1148	0.5068	0.0054	0.00061	0.00021	0.000024	0.000002	0.11084	0.184	0.064	0.000017	0.0000046	0.62	0.21	0.155	0.013	0.343	0.092	3.3	0.154	**240000**	**25000**	250000	21000
KPT04-24-Grain 9		35.5	71	64.6	7	587	0.4472	0.0074	0.00079	0.00031	0.0000202	0.0000021	-0.091782	0.4	0.19	0.0000117	0.0000067	0.8	0.32	0.13	0.013	0.24	0.14	3.3	0.136	**210000**	**25000**	220000	23000
KPT04-24-Grain 10	Integration 1	36.3	106	110	5.9	667	0.5631	0.0276	0.00058	0.00026	0.0000314	0.000003	0.044951	0.115	0.057	0.0000129	0.0000047	0.59	0.26	0.202	0.02	0.26	0.094	3.3	0.171	**290000**	**34000**	290000	28000
KPT04-24-Grain 10	Integration 2	5.3	210	192	22	1440	0.5291	0.0448	0.00071	0.00057	0.0000264	0.0000036	-0.37022	0.14	0.13	0.0000127	0.0000064	0.72	0.57	0.17	0.023	0.26	0.13	3.3	0.160	**250000**	**39000**	260000	36000
KPT04-24-Grain 11	Integration 1	36.0	206	202	7.1	1182	0.9881	0.0674	0.0003	0.00014	0.0000317	0.0000018	-0.24029	0.091	0.04	0.0000119	0.0000023	0.3	0.14	0.204	0.012	0.24	0.047	3.3	0.299	**270000**	**36000**	280000	16000
KPT04-24-Grain 11	Integration 2	10.8	350	162	6.6	791	1.1848	0.0168	0.00017	0.00019	0.0000351	0.0000031	0.0026792	0.027	0.042	0.0000116	0.0000041	0.17	0.19	0.226	0.02	0.235	0.083	3.3	0.359	**290000**	**45000**	300000	26000
KPT04-24-Grain 12	Integration 1	11.6	70	176	17	1830	0.5376	0.0286	0.00037	0.00024	0.0000193	0.0000021	0.070449	0.097	0.079	0.0000055	0.0000037	0.37	0.25	0.125	0.014	0.111	0.075	3.3	0.163	**200000**	**28000**	220000	23000
KPT04-24-Grain 12	Integration 2	36.0	172	97	8.1	843	0.4380	0.0106	0.00075	0.00025	0.0000216	0.0000017	0.081307	0.31	0.11	0.0000079	0.0000049	0.77	0.25	0.139	0.011	0.16	0.1	3.3	0.133	**220000**	**22000**	230000	18000
KPT04-24-Grain 13		38.0	115	90.2	5.2	637	0.4246	0.0079	0.00049	0.00019	0.0000253	0.0000025	0.22182	0.187	0.091	0.0000178	0.0000068	0.49	0.19	0.163	0.016	0.36	0.14	3.3	0.129	**250000**	**27000**	260000	26000
KPT04-24-Grain 14		15.1	126	149	9.5	790	0.5479	0.0060	0.0004	0.00028	0.0000341	0.0000034	-0.088482	0.125	0.071	0.0000227	0.0000074	0.4	0.28	0.22	0.022	0.46	0.15	3.3	0.166	**300000**	**35000**	310000	31000
KPT04-24-Grain 15	Integration 1	36.3	114	77.2	4.9	671	0.4151	0.0045	0.0004	0.00018	0.0000202	0.0000019	0.087844	0.159	0.084	0.0000071	0.0000053	0.4	0.19	0.13	0.012	0.14	0.11	3.3	0.126	**210000**	**23000**	230000	21000
KPT04-24-Grain 15	Integration 2	6.0	100	115	16	1040	0.4376	0.0126	0.00047	0.00041	0.0000222	0.0000034	-0.2025	0.11	0.12	0.000009	0.000011	0.47	0.42	0.143	0.022	0.18	0.22	3.3	0.133	**230000**	**35000**	240000	36000
KPT04-24-Grain 16		24.3	41	173	9.3	1013	0.5426	0.0212	0.00056	0.00022	0.0000318	0.0000022	-0.0064721	0.129	0.058	0.0000145	0.0000042	0.57	0.22	0.205	0.014	0.294	0.085	3.3	0.164	**290000**	**27000**	300000	20000
KPT04-24-Grain 17		33.3	-141	54.6	5.4	399	0.5056	0.0120	0.00052	0.00042	0.0000225	0.0000028	-0.066381	0.36	0.25	0.000012	0.0000084	0.53	0.43	0.145	0.018	0.24	0.17	3.3	0.153	**230000**	**31000**	240000	30000
KPT04-24-Grain 18		26.1	219	138	6.5	781	0.5577	0.0047	0.00032	0.0002	0.000031	0.0000025	0.16863	0.073	0.049	0.0000147	0.0000051	0.32	0.2	0.2	0.016	0.3	0.1	3.3	0.169	**280000**	**29000**	290000	23000
KPT04-24-Grain 19		35.4	226	88.5	3.2	553	0.9251	0.0231	0.00011	0.00022	0.0000315	0.0000031	0.25857	0.033	0.062	0.0000115	0.0000041	0.11	0.22	0.203	0.02	0.233	0.083	3.3	0.280	**280000**	**41000**	280000	28000
KPT04-24-Grain 20		23.4	147	127	10	582	0.6588	0.0330	0.0008	0.0004	0.0000404	0.0000033	0.34251	0.128	0.076	0.0000248	0.0000077	0.81	0.41	0.261	0.021	0.5	0.15	3.3	0.200	**340000**	**38000**	350000	28000
KPT04-24-Grain 21		29.4	99	118.5	6.7	714	0.4427	0.0098	0.00037	0.00024	0.0000295	0.0000025	0.28111	0.086	0.057	0.0000187	0.0000065	0.37	0.24	0.19	0.016	0.38	0.13	3.3	0.134	**280000**	**27000**	280000	24000
KPT04-24-Grain 22		26.4	154	73.3	7.3	464	0.5376	0.0087	0.00054	0.00037	0.0000281	0.0000031	-0.2218	0.24	0.19	0.0000141	0.0000087	0.55	0.38	0.181	0.02	0.28	0.17	3.3	0.163	**260000**	**33000**	270000	30000
KPT04-24-Grain 24		30.9	133	55.5	7	468	0.4425	0.0255	0.00066	0.00038	0.0000214	0.0000027	0.10265	0.37	0.23	0.000019	0.0000095	0.67	0.39	0.138	0.017	0.38	0.19	3.3	0.134	**220000**	**30000**	230000	29000
KPT04-24-Grain 25		33.3	96	96.3	9	860	0.4666	0.0131	0.00065	0.00025	0.0000212	0.0000019	-0.28404	0.36	0.14	0.0000133	0.0000048	0.66	0.25	0.137	0.012	0.269	0.098	3.3	0.141	**220000**	**24000**	230000	21000
KPT04-24-Grain 26	Integration 1	14.1	250	108	7.4	1004	1.1403	0.0260	0.0002	0.00022	0.0000226	0.0000029	-0.080912	0.09	0.1	0.00001	0.000004	0.2	0.23	0.146	0.019	0.202	0.081	3.3	0.346	**210000**	**44000**	220000	28000
KPT04-24-Grain 26	Integration 2	16.2	170	75.8	6.3	441	1.0363	0.0140	0.00046	0.00034	0.0000299	0.0000034	0.068306	0.19	0.13	0.0000145	0.0000056	0.46	0.35	0.193	0.022	0.29	0.11	3.3	0.314	**260000**	**45000**	270000	30000
Plesovice 1	Secondary SRM	24.2	60	2.20E+05	3.60E+02	705	0.0784	0.0007	0.4126	0.0079	0.05396	0.00054	0.2607	0.05533	0.00099	0.01978	0.00069	350.5	5.7	338.8	3.3	396	14						
Plesovice 2	Secondary SRM	28.6	120	2.11E+05	3.90E+02	676	0.0787	0.0006	0.4025	0.008	0.05418	0.0005	0.20446	0.05421	0.001	0.01664	0.00058	343.2	5.8	340.2	3.1	333.5	12						
Plesovice 3	Secondary SRM	36.3	-13	1.68E+05	2.50E+02	556	0.0773	0.0006	0.3946	0.008	0.05395	0.00051	0.26339	0.05301	0.0011	0.01707	0.0006	337.5	5.8	338.7	3.1	342.1	12						
Plesovice 4	Secondary SRM	34.6	24	1.44E+05	2.30E+02	496	0.0783	0.0007	0.3916	0.0088	0.05333	0.00046	0.2988	0.0534	0.0012	0.01682	0.0006	335.2	6.4	334.9	2.8	337	12						
Plesovice 5	Secondary SRM	32.4	31	2.33E+05	4.30E+02	794	0.0781	0.0007	0.3936	0.007	0.0542	0.00053	0.50851	0.05307	0.00093	0.01679	0.00052	336.8	5.1	340.3	3.2	336.5	10						
Temora 1	Secondary SRM	23.0	-189	23950	89	66	0.3120	0.0043	0.502	0.028	0.06699	0.00078	0.012282	0.0541	0.0031	0.01966	0.00093	413	19	418	4.7	394	18						
Temora 2	Secondary SRM	35.1	-23	3.59E+04	1.20E+02	96	0.4773	0.0034	0.518	0.02	0.06717	0.00065	0.13292	0.0558	0.0022	0.02052	0.00072	424	14	419.1	3.9	410.5	14						
Temora 3	Secondary SRM	36.0	27	31390	79	85	0.3229	0.0028	0.506	0.021	0.06658	0.00063	0.061501	0.0554	0.0023	0.02027	0.00078	414	14	415.5	3.8	406	15						
Temora 4	Secondary SRM	36.0	48	5.13E+04	1.30E+02	138	0.3067	0.0113	0.519	0.015	0.06724	0.00064	0.39932	0.0563	0.0016	0.02128	0.00077	423.7	11	419.5	3.8	426	15						
Temora 5	Secondary SRM	19.5	-10	4.03E+04	1.00E+02	114	0.4638	0.0041	0.501	0.019	0.06745	0.00075	0.26072	0.0544	0.0021	0.02123	0.0007	412	13	420.7	4.5	424.6	14						
Temora 6	Secondary SRM	36.0	-42	3.28E+04	8.90E+01	92	0.3498	0.0060	0.517	0.019	0.06679	0.00068	0.0094455	0.056	0.0022	0.02115	0.00073	421	13	416.8	4.1	424.1	14						
91500 1	Secondary SRM	14.7	0	9.28E+04	2.10E+02	97	0.3342	0.0045	1.823	0.055	0.1796	0.0022	0.29175	0.0736	0.0022	0.0524	0.0019	1052	20	1064.6	12	1032	37						
91500 2	Secondary SRM	18.7	90	7.39E+04	2.40E+02	77	0.3298	0.0048	1.916	0.055	0.1794	0.0019	0.0056876	0.0783	0.0022	0.0543	0.002	1085	19	1063.6	10	1069	38						
91500 3	Secondary SRM	37.7	62	7.91E+04	2.40E+02	79	0.3315	0.0033	1.855	0.042	0.1803	0.0016	0.025556	0.0749	0.0018	0.05441	0.0017	1063	15	1068.4	9	1071	32						
91500 4	Secondary SRM	36.0	74	6.91E+04	2.20E+02	71	0.3364	0.0034	1.88	0.05	0.1789	0.0017	0.35264	0.0763	0.0019	0.054	0.0017	1071	18	1060.9	9.4	1063	33						
91500 5	Secondary SRM	36.1	82	7.84E+04	2.40E+02	81	0.3285	0.0024	1.869	0.043	0.17951	0.0016	-0.0096042	0.0761	0.0018	0.0547	0.0018	1068	15	1064.2	8.9	1076	34						
91500 6	Secondary SRM	26.5	9	7.83E+04	2.40E+02	82	0.3312	0.0033	1.847	0.041	0.179	0.0018	0.010588	0.0756	0.0017	0.0532	0.0018	1063	15	1061.2	9.9	1048	34						
91500 7	Secondary SRM	36.4	-58	8.62E+04	2.60E+02	89	0.3331	0.0026	1.878	0.044	0.1805	0.0017	0.37105	0.0759	0.0017	0.05387	0.0017	1076	16	1069.6	9	1060	32						
91500 8	Secondary SRM	26.5	-91	7.53E+04	2.20E+02	79	0.3288	0.0037	1.875	0.055	0.1795	0.0017	0.23345	0.0764	0.0021	0.0532	0.0018	1072	19	1064.3	9.5	1047	34						
GJ-1 1	Primary SRM	36.1	26	1.75E+05	4.10E+02	317	0.0335	0.0004	0.805	0.015	0.09693	0.00088	0.42365	0.06013	0.001	0.03	0.0013	599.9	8.6	596.4	5.2	598	26						

Identifier	Comment	Integration length seconds	204 cps	206 cps	207 cps	Approx. U ppm	Th/U	Th/U 1 SE abs	Final 207/235	Final 207/235 Prop 2SE	Final 206/238	Final 206/238 Prop 2SE	Error Correlation 206/238 vs 207/235	Final 207/206	Final 207/206 Prop 2SE	Final 208/232	Final 208/232 Prop 2SE	FinalAge 207/235	FinalAge 207/235 Prop 2SE	FinalAge 206/238	FinalAge 206/238 Prop 2SE	FinalAge 208/232	FinalAge 208/232 Prop 2SE	Th/U magma	f (Th/U)	**Th disequilibrium corrected Age (equation 3)**	**Error Prop 2SE (equation 3)**	Th disequilibrium corrected Age (equation 1)	Error Prop 2SE (equation 1)
GJ-1 2	Primary SRM	36.1	-105	1.76E+05	4.30E+02	320	0.0335	0.0004	0.817	0.016	0.09755	0.00078	0.38279	0.06053	0.0012	0.0307	0.0014	605.8	8.7	600	4.6	611	27						
GJ-1 3	Primary SRM	36.1	-63	1.76E+05	3.80E+02	319	0.0337	0.0004	0.808	0.016	0.09756	0.00088	0.19072	0.0598	0.0012	0.0294	0.0013	601.7	8.9	600.1	5.2	586	26						
GJ-1 4	Primary SRM	36.1	89	1.76E+05	3.90E+02	320	0.0336	0.0005	0.81	0.015	0.09776	0.00087	0.018787	0.06018	0.0011	0.0311	0.0013	601.9	8.4	601.3	5.1	620	25						
GJ-1 5	Primary SRM	36.1	65	1.74E+05	4.30E+02	323	0.0333	0.0004	0.805	0.016	0.09754	0.00087	0.26782	0.05993	0.0011	0.03	0.0013	598.9	9.1	600	5.1	597	25						
GJ-1 6	Primary SRM	36.1	33	1.76E+05	4.10E+02	325	0.0340	0.0004	0.807	0.016	0.09767	0.0008	0.26898	0.06011	0.0012	0.0292	0.0014	601.1	8.8	600.7	4.7	581	27						
GJ-1 7	Primary SRM	36.1	78	1.74E+05	3.70E+02	320	0.0336	0.0003	0.804	0.014	0.09819	0.00085	0.17788	0.05946	0.0011	0.0305	0.0013	598.7	8	603.8	5	608	25						
GJ-1 8	Primary SRM	36.1	130	1.75E+05	4.20E+02	327	0.0336	0.0005	0.815	0.015	0.09726	0.00079	0.12184	0.06079	0.0012	0.03051	0.0012	604.9	8.6	598.3	4.6	607	24						
GJ-1 9	Primary SRM	36.1	128	1.74E+05	4.20E+02	321	0.0336	0.0004	0.819	0.017	0.09818	0.00091	0.26853	0.0605	0.0012	0.0295	0.0013	606.6	9.2	603.7	5.4	588	26						
GJ-1 10	Primary SRM	36.1	4	1.72E+05	3.90E+02	321	0.0339	0.0004	0.815	0.017	0.09795	0.00088	0.2326	0.06029	0.0012	0.0299	0.0013	605.9	9.6	602.4	5.2	596	26						
GJ-1 11	Primary SRM	36.1	75	1.71E+05	4.00E+02	315	0.0336	0.0003	0.802	0.015	0.09733	0.00087	0.089037	0.05981	0.0012	0.0306	0.0014	597.2	8.5	598.7	5.1	609	28						
GJ-1 12	Primary SRM	36.1	70	1.72E+05	4.20E+02	324	0.0340	0.0004	0.821	0.016	0.09793	0.00083	0.27321	0.0607	0.0012	0.0303	0.0013	608.1	9.2	602.2	4.9	603	26						
GJ-1 13	Primary SRM	36.1	10	1.70E+05	4.10E+02	317	0.0337	0.0004	0.808	0.016	0.09836	0.00088	0.24774	0.05988	0.0011	0.0293	0.0013	600.8	8.6	604.7	5.1	583	25						
GJ-1 14	Primary SRM	36.1	44	1.70E+05	3.90E+02	322	0.0340	0.0004	0.798	0.017	0.09776	0.00085	0.36481	0.0597	0.0012	0.0301	0.0014	596.1	9.5	601.2	5	599	28						
GJ-1 15	Primary SRM	36.1	155	1.71E+05	3.90E+02	328	0.0335	0.0004	0.801	0.018	0.09688	0.00086	0.36875	0.0607	0.0012	0.0293	0.0013	596.9	9.8	596.1	5.1	583	26						
GJ-1 16	Primary SRM	36.1	10	1.68E+05	3.70E+02	319	0.0335	0.0004	0.808	0.016	0.0971	0.0009	0.14989	0.06001	0.0011	0.0306	0.0013	600.6	9	597.4	5.3	610	26						
GJ-1 17	Primary SRM	36.1	49	1.68E+05	3.50E+02	320	0.0334	0.0004	0.799	0.016	0.09787	0.00085	0.27956	0.05954	0.0012	0.0307	0.0014	596.3	9	601.9	5	610	27						
GJ-1 18	Primary SRM	36.1	-93	1.68E+05	3.50E+02	320	0.0339	0.0004	0.81	0.015	0.09763	0.00091	0.37718	0.06023	0.0011	0.0298	0.0014	602.6	8.6	600.5	5.4	594	27						
GJ-1 19	Primary SRM	36.1	82	1.68E+05	3.80E+02	322	0.0336	0.0004	0.82	0.016	0.09773	0.00086	0.36699	0.06043	0.0011	0.0299	0.0014	608.1	9.1	601.1	5.1	595	28						
GJ-1 20	Primary SRM	36.1	47	1.66E+05	4.10E+02	319	0.0333	0.0004	0.816	0.016	0.09723	0.00088	0.20606	0.06035	0.0012	0.0306	0.0013	605.2	9	598.2	5.2	608	26						
2. October 2013, Departement of earth sciences, ETH Zürich, Switzerland																													
NS07 Grain 2		21.5	31	27.8	6.7	564	0.9311	0.0338	0.0002	0.0001	0.0000085	0.0000017	-0.016147	0.18	0.15	0.0000106	0.0000047	0.21	0.11	0.055	0.011	0.213	0.095	4	0.233	**106900**	**31000**	138600	28000
NS07 Grain 3	*few common-Pb*	*7.5*	*72*	*50*	*32*	*182.9*	*0.7440*	*0.0144*	*0.0045*	*0.0022*	*0.000048*	*0.000016*	*0.68905*	*0.57*	*0.33*	*0.00008*	*0.000052*	*4.6*	*2.2*	*0.31*	*0.11*	*1.6*	*1*	*4*	*0.186*	***400000***	***120000***	*400000*	*130000*
NS07 Grain 4	*few common-Pb*	*11.1*	*-11*	*31.8*	*23.4*	*149.6*	*0.7553*	*0.0114*	*0.00323*	*0.00091*	*0.0000314*	*0.0000078*	*-0.24816*	*1*	*0.75*	*0.000067*	*0.000031*	*3.27*	*0.92*	*0.202*	*0.051*	*1.35*	*0.63*	*4*	*0.189*	***280000***	***68000***	*290000*	*72000*
NS07 Grain 5	*high common-Pb*	*13.4*	*73*	*694*	*598*	*190.9*	*1.1390*	*0.0182*	*0.069*	*0.011*	*0.000557*	*0.000081*	*0.93534*	*0.839*	*0.048*	*0.00127*	*0.00022*	*67*	*10*	*3.59*	*0.52*	*25.7*	*4.4*	*4*	*0.285*	***3700000***	***550000***	*3700000*	*530000*
NS07 Grain 6	*high common-Pb*	*3.8*	*40*	*1380*	*1260*	*368*	*0.9328*	*0.0261*	*0.088*	*0.024*	*0.00069*	*0.00021*	*0.71529*	*0.856*	*0.09*	*0.00171*	*0.00057*	*85*	*22*	*4.4*	*1.4*	*35*	*12*	*4*	*0.233*	***5000000***	***1400000***	*5000000*	*1400000*
NS07 Grain 7		36.6	6	17.7	9.5	221	1.1755	0.0115	0.00098	0.00027	0.0000124	0.0000023	0.19171	0.46	0.24	0.0000125	0.0000052	1	0.27	0.08	0.015	0.25	0.11	4	0.294	**134300**	**37000**	157000	29000
NS07 Grain 8	*Integration 1 few common-Pb*	*6.6*	*40*	*33*	*18.3*	*206.4*	*0.8163*	*0.0147*	*0.0023*	*0.001*	*0.000028*	*0.0000071*	*0.26032*	*0.45*	*0.2*	*0.000097*	*0.000049*	*2.3*	*1.1*	*0.181*	*0.046*	*1.97*	*0.99*	*4*	*0.204*	***260000***	***65000***	*270000*	*68000*
NS07 Grain 8	*Integration 2 few common-Pb*	*13.1*	*28*	*49.5*	*38.9*	*167.7*	*1.0373*	*0.0215*	*0.00472*	*0.00094*	*0.0000454*	*0.0000092*	*0.27461*	*1.14*	*0.33*	*0.000108*	*0.00003*	*4.78*	*0.95*	*0.292*	*0.059*	*2.19*	*0.6*	*4*	*0.259*	***370000***	***80000***	*370000*	*76000*
NS07 Grain 9	*high common-Pb*	*11.5*	*66*	*870*	*710*	*195*	*1.3928*	*0.0446*	*0.072*	*0.0069*	*0.000622*	*0.000061*	*0.75615*	*0.835*	*0.06*	*0.00104*	*0.00012*	*70.4*	*6.5*	*4.01*	*0.39*	*21*	*2.3*	*4*	*0.348*	***4100000***	***420000***	*4100000*	*400000*
NS07 Grain 10	*high common-Pb*	*5.2*	*104*	*272*	*254*	*135.3*	*0.7855*	*0.0321*	*0.0473*	*0.008*	*0.000359*	*0.000054*	*0.69659*	*0.95*	*0.13*	*0.00119*	*0.00029*	*46.8*	*7.7*	*2.32*	*0.35*	*24.1*	*5.9*	*4*	*0.196*	***2400000***	***370000***	*2400000*	*360000*
NS07 Grain 11		13.9	7	31.5	8.3	535	1.4265	0.0326	0.00033	0.00017	0.0000098	0.000002	0.086808	0.46	0.31	0.0000128	0.0000054	0.33	0.17	0.063	0.013	0.26	0.11	4	0.357	**106800**	**39000**	133400	27000
NS07 Grain 12	*high common-Pb*	*12.7*	*39*	*57*	*55.7*	*149.5*	*0.7168*	*0.0149*	*0.0089*	*0.0015*	*0.000065*	*0.000014*	*0.10637*	*1.57*	*0.67*	*0.000206*	*0.000066*	*9*	*1.5*	*0.417*	*0.089*	*4.2*	*1.3*	*4*	*0.179*	***500000***	***100000***	*500000*	*110000*
NS07 Grain 13		7.7	-33	12.3	12.9	157.3	0.6887	0.0104	0.00153	0.00091	0.0000125	0.0000054	-0.19284	0.6	1	0.000067	0.000038	1.55	0.93	0.081	0.035	1.36	0.77	4	0.172	**147200**	**59000**	171000	74000
NS07 Grain 14		33.0	37	9.8	4	266.7	0.7752	0.0072	0.00033	0.00014	0.0000063	0.0000017	-0.044987	-0.01	0.22	0.0000115	0.0000059	0.33	0.14	0.041	0.011	0.23	0.12	4	0.194	**90000**	**29000**	128600	35000
NS07 Grain 15		26.7	61	18	7.1	537	1.1570	0.0110	0.000281	0.000098	0.0000055	0.0000011	0.026945	0.35	0.24	0.0000082	0.0000035	0.286	0.099	0.0352	0.0072	0.166	0.071	4	0.289	**70000**	**27000**	113100	23000
NS07 Grain 17		35.3	41	29.2	11.2	383	1.6644	0.0247	0.00063	0.00017	0.0000124	0.0000019	0.41989	0.44	0.15	0.0000078	0.0000026	0.64	0.17	0.08	0.012	0.158	0.053	4	0.416	**122800**	**40000**	143700	22000
NS07 Grain 18	*few common-Pb*	*12.3*	*15*	*47.4*	*30.2*	*294.7*	*1.0799*	*0.0163*	*0.00252*	*0.0006*	*0.0000303*	*0.0000061*	*0.23099*	*0.44*	*0.44*	*0.000059*	*0.00002*	*2.56*	*0.61*	*0.196*	*0.039*	*1.19*	*0.41*	*4*	*0.270*	***270000***	***61000***	*280000*	*55000*
NS07 Grain 19	*high common-Pb*	*4.4*	*-190*	*93*	*103*	*245*	*0.6618*	*0.0223*	*0.0106*	*0.002*	*0.000071*	*0.000013*	*0.15974*	*1.3*	*0.33*	*0.000199*	*0.000052*	*10.7*	*2*	*0.455*	*0.083*	*4*	*1.1*	*4*	*0.165*	***550000***	***97000***	*500000*	*100000*
NS07 Grain 20	*few common-Pb*	*15.8*	*32*	*18.9*	*19.6*	*127*	*0.6784*	*0.0087*	*0.00336*	*0.00094*	*0.0000256*	*0.0000072*	*0.22605*	*0.06*	*0.66*	*0.000122*	*0.000045*	*3.4*	*0.95*	*0.165*	*0.047*	*2.47*	*0.9*	*4*	*0.170*	***250000***	***64000***	*260000*	*72000*
NS07 Grain 21	*few common-Pb*	*19.6*	*11*	*11.7*	*15*	*111.9*	*0.8285*	*0.0137*	*0.00283*	*0.00082*	*0.0000163*	*0.0000054*	*0.36468*	*0.05*	*0.5*	*0.000073*	*0.000028*	*2.86*	*0.83*	*0.105*	*0.035*	*1.47*	*0.56*	*4*	*0.207*	***173700***	***57000***	*191700*	*63000*
NS07 Grain 22		28.4	43	12.3	5	141.7	0.7764	0.0416	0.00076	0.00036	0.0000132	0.0000033	0.041745	-0.07	0.29	0.000026	0.000012	0.77	0.36	0.085	0.021	0.53	0.25	4	0.194	**150700**	**42000**	173100	43000
NS07 Grain 23		30.4	16	10.2	4.8	137.8	0.7364	0.0098	0.00079	0.00033	0.0000118	0.0000034	0.060079	0.18	0.25	0.0000139	0.0000092	0.8	0.34	0.076	0.022	0.28	0.18	4	0.184	**140200**	**42000**	165200	48000
NS07 Grain 24		19.3	5	14.5	5.6	256	1.0917	0.0346	0.00039	0.0002	0.000009	0.0000025	0.031062	0.41	0.34	0.0000091	0.0000062	0.4	0.21	0.058	0.016	0.18	0.13	4	0.273	**107600**	**41000**	137400	38000
NS07 Grain 25		20.4	-15	3.3	1.6	64.7	0.6897	0.0100	0.0007	0.0006	0.000009	0.0000064	0.1208	-0.22	0.3	0.00007	0.000042	0.71	0.61	0.058	0.041	1.41	0.85	4	0.172	**117300**	**79000**	148000	110000
NS24 - Grain 2		12.6	-32	10.6	6.3	137.7	0.7559	0.0206	0.00099	0.00044	0.0000126	0.0000044	0.038122	0.11	0.45	0.000031	0.00002	1.01	0.44	0.081	0.028	0.63	0.41	3.85	0.196	**145600**	**51000**	169000	59000
NS24 - Grain 3		38.2	43	77.1	8.7	777	1.3170	0.0118	0.000234	0.000061	0.0000164	0.0000014	0.067545	0.147	0.048	0.0000099	0.0000026	0.238	0.062	0.1058	0.009	0.201	0.052	3.85	0.342	**160900**	**32000**	177600	15000
NS24 - Grain 4		36.8	30	20.2	12.3	122.2	0.7622	0.0110	0.00224	0.00052	0.0000274	0.0000053	0.092146	0.23	0.33	0.000064	0.00002	2.27	0.52	0.177	0.034	1.28	0.4	3.85	0.198	**260000**	**51000**	260000	51000
NS24 - Grain 5	*few common-Pb*	*22.6*	*44*	*51.9*	*36.9*	*153*	*0.7949*	*0.0152*	*0.00573*	*0.0009*	*0.0000596*	*0.0000089*	*0.068405*	*0.89*	*0.4*	*0.000143*	*0.000041*	*5.79*	*0.91*	*0.384*	*0.057*	*2.9*	*0.82*	*3.85*	*0.206*	***470000***	***73000***	*470000*	*70000*
NS24 - Grain 6	*Integration 1, few common-Pb*	*10.7*	*-8*	*44*	*29.1*	*140.6*	*0.8518*	*0.0138*	*0.0044*	*0.0014*	*0.000054*	*0.000013*	*0.29461*	*0.77*	*0.38*	*0.000132*	*0.000056*	*4.5*	*1.4*	*0.346*	*0.085*	*2.7*	*1.1*	*3.85*	*0.221*	***400000***	***100000***	*400000*	*100000*
NS24 - Grain 7	Integration 1	18.5	59	12.8	6.6	220.1	1.1086	0.0234	0.00061	0.00031	0.0000096	0.0000027	-0.040672	0.16	0.39	0.0000171	0.0000084	0.61	0.31	0.062	0.018	0.34	0.17	3.85	0.288	**111400**	**42000**	139600	39000
NS24 - Grain 6	*Integration 2, high common-Pb*	*10.3*	*12*	*208*	*180*	*142.9*	*0.7479*	*0.0218*	*0.0285*	*0.003*	*0.000234*	*0.00003*	*0.29292*	*0.99*	*0.16*	*0.00084*	*0.00013*	*28.5*	*2.9*	*1.51*	*0.2*	*16.9*	*2.6*	*3.85*	*0.194*	***1596000***	***210000***	*1596000*	*200000*
NS24 - Grain 7	*Integration 2, few common-Pb*	*7.2*	*-20*	*65*	*66*	*198.3*	*0.6274*	*0.0197*	*0.0091*	*0.0022*	*0.000062*	*0.000013*	*0.28658*	*1.17*	*0.27*	*0.00027*	*0.000094*	*9.2*	*2.2*	*0.401*	*0.083*	*5.5*	*1.9*	*3.85*	*0.163*	***490000***	***97000***	*500000*	*100000*
NS24 - Grain 8		10.9	-33	6.8	3.1	65.7	0.6418	0.0198	0.0012	0.0012	0.0000194	0.0000094	0.14935	0.13	0.44	0.000055	0.000057	1.2	1.2	0.125	0.06	1.1	1.2	3.85	0.167	**200000**	**87000**	200000	100000
NS24 - Grain 10		7.1	60	23.2	18.5	149.9	1.2674	0.0209	0.00272	0.00083	0.0000238	0.0000075	0.096605	1.04	0.47	0.000086	0.000035	2.75	0.84	0.154	0.048	1.74	0.7	3.85	0.329	**220000**	**77000**	230000	71000
NISP2(1) -Grain 1		30.7	117	9.6	7.1	124.4	0.7102	0.0172	0.00132	0.00043	0.0000134	0.0000041	0.055576	0.17	0.28	0.000045	0.000019	1.34	0.44	0.086	0.026	0.91	0.39	3.85	0.184	**153300**	**47000**	175400	54000
NISP2(1) -Grain 2		34.6	46	276	26.9	2526	2.5056	0.0396	0.000235	0.000037	0.00001638	0.00000064	0.024723	0.104	0.017	6.82E-06	7.9E-07	0.238	0.037	0.1056	0.0041	0.138	0.016	3.85	0.651	**132300**	**42000**	143720	5600
NISP2(1) -Grain 4		14.6	-15	11.5	9.1	96.8	0.6761	0.0082	0.002	0.00073	0.0000189	0.0000061	0.10824	0.14	0.38	0.000022	0.00002	2.03	0.74	0.122	0.039	0.45	0.4	3.85	0.176	**196700**	**59000**	210000	68000
NISP2(1) -Grain 5		10.1	32	12.6	4.5	82.6	0.7440	0.0210	0.00123	0.00095	0.000021	0.00001	-0.023988	-0.24	0.63	0.000061	0.000049	1.24	0.96	0.132	0.066	1.23	0.99	3.85	0.193	**210000**	**91000**	200000	110000
NISP2(1) -Grain 6		8.7	40	71	49	779	1.0953	0.0516	0.00125	0.00028	0.0000136	0.000003	0.21058	0.92	0.23	0.0000254	0.0000078	1.27	0.28	0.088	0.019	0.51	0.16	3.85	0.284	**144800**	**45000**	165800	37000
NISP2(1) -Grain 8		20.4	46	15.5	6	114.9	0.8032	0.0084	0.00114	0.00058	0.0000215	0.0000049	0.01042	0.2	0.39	0.000053	0.000024	1.15	0.58	0.139	0.031	1.07	0.48	3.85	0.209	**210000**	**50000**	230000	51000
NISP2(1) -Grain 10	*few common-Pb*	*9.5*	*43*	*27.3*	*17.8*	*105.1*	*0.7949*	*0.0202*	*0.0034*	*0.0011*	*0.000037*	*0.000012*	*-0.0081266*	*0.09*	*0.72*	*0.000049*	*0.000033*	*3.4*	*1.1*	*0.239*	*0.077*	*0.99*	*0.66*	*3.85*	*0.206*	***320000***	***97000***	*300000*	*110000*
NISP2(1) -Grain 11		23.8	51	29.3	24.6	248	0.9814	0.0424	0.00199	0.00038	0.0000173	0.0000031	-0.024786	0.63	0.47	0.000051	0.000017	2.02	0.38	0.111	0.02	1.02	0.34	3.85	0.255	**176500**	**42000**	192900	35000
NISP2(1) -Grain 12		35.7	28	48.5	27.2	314	0.9960	0.0169	0.00191	0.00031	0.0000249	0.0000031	0.099131	0.61	0.15	0.0000337	0.000009	1.94	0.31	0.16	0.02	0.68	0.18	3.85	0.259	**230000**	**40000**	240000	30000
NISP2(1) -Grain 14		15.7	57	18.4	15.5	136.3	0.8013	0.0096	0.00221	0.0007	0.0000203	0.0000055	-0.12161	-0.05	0.7	0.000069	0.000031	2.24	0.7	0.131	0.035	1.4	0.64	3.85	0.208	**200000**	**56000**	220000	59000
NISP2(1) -Grain 18		7.5	44	74	40	559	0.7968	0.0165	0.0016	0.00039	0.0000217	0.0000043	0.098032	0.8	0.27	0.00003	0.000013	1.62	0.4	0.14	0.028	0.61	0.26	3.85	0.207	**210000**	**46000**	230000	45000
NISP2(1) -Grain 19		33.8	58	8.1	5.3	131	0.6165	0.0053	0.00089	0.00031	0.0000096	0.0000027	0.096468	-0.04	0.27	0.000053	0.00002	0.9	0.32	0.062	0.017	1.06	0.4	3.85	0.160	**123800**	**35000**	153600	43000
NISP2(1) -Grain 20		4.6	0	58	38	332.3	0.8389	0.0190	0.0025	0.0013	0.0000279	0.0000072	0.0028848	0.55	0.46	0.000058	0.000033	2.5	1.3	0.18	0.047	1.16	0.67	3.85	0.218	**260000**	**67000**	270000	68000
NISP2(1) -Grain 22		23.5	83	18	12.5	135.8	0.7746	0.0072	0.00199	0.00053	0.0000209	0.0000051	0.11611	0.43	0.43	0.000046	0.000018	2.02	0.54	0.135	0.033	0.93	0.37	3.85	0.201	**210000**	**52000**	220000	54000
NISP2(1) -Grain 25		4.0	-20	16	3.6	184	0.9728	0.0322	0.00049	0.00061	0.000016	0.000012	-0.16729	-0.17	0.54	0.000036	0.000028	0.5	0.62	0.102	0.079	0.72	0.56	3.85	0.253	**167000**	**120000**	185000	140000
NISP2(1) -Grain 28	*few common-Pb*	*5.2*	*19*	*79*	*73*	*233.2*	*1.0753*	*0.0197*	*0.0074*	*0.0014*	*0.000057*	*0.000011*	*0.20353*	*0.96*	*0.25*	*0.000135*	*0.000064*	*7.5*	*1.4*	*0.371*	*0.069*	*2.7*	*1.3*	*3.85*	*0.279*	***440000***	***92000***	*450000*	*86000*
Z_Plesovice_1	Secondary SRM	11.5	-4	2.62E+05	2.33E+03	674.2	0.0962	0.0015	0.4046	0.0072	0.0552	0.00067	0.53852	0.05352	0.00077	0.01784	0.00076	344.8	5.2	346.3	4.1	357	15						
Z_Plesovice_2	Secondary SRM	32.4	-38	1.70E+05	4.31E+03	492	0.1002	0.0020	0.3904	0.0049	0.05334	0.00046	0.58277	0.05267	0.00049	0.01742	0.00058	334.5	3.6	335	2.8	349	12						
Z_Plesovice_3	Secondary SRM	27.7	31	2.73E+05	1.82E+03	825	0.1731	0.0017	0.396	0.0066	0.05299	0.00055	0.69057	0.05507	0.00065	0.01783	0.00053	339.1	4.9	332.8	3.4	357	11						
Z_Plesovice_4	Secondary SRM	17.2	36	2.77E+05	2.62E+03	874	0.1012	0.0013	0.3996	0.006	0.05402	0.00063	0.6247	0.05288	0.00062	0.01678	0.00057	341.2	4.4	339.1	3.9	336	11						

Identifier	Comment	Integration length seconds	204 cps	206 cps	207 cps	Approx. U ppm	Th/U	Th/U 1 SE abs	Final 207/235	Final 207/235 Prop 2SE	Final 206/238	Final 206/238 Prop 2SE	Error Correlation 206/238 vs 207/235	Final 207/206	Final 207/206 Prop 2SE	Final 208/232	Final 208/232 Prop 2SE	FinalAge 207/235	FinalAge 207/235 Prop 2SE	FinalAge 206/238	FinalAge 206/238 Prop 2SE	FinalAge 208/232	FinalAge 208/232 Prop 2SE	Th/U magma	f (Th/U)	**Th disequilibrium corrected Age (equation 3)**	**Error Prop 2SE (equation 3)**	Th disequilibrium corrected Age (equation 1)	Error Prop 2SE (equation 1)
Z_Plesovice_5	Secondary SRM	12.8	94	8.38E+04	6.39E+03	318	0.0951	0.0019	0.3932	0.0094	0.05432	0.00066	0.5069	0.05327	0.00093	0.0173	0.0013	336.4	6.8	341	4	347	25						
Z_Plesovice_6	Secondary SRM	32.2	30	1.09E+05	3.67E+03	420.1	0.0921	0.0014	0.3956	0.0058	0.05371	0.00053	0.49208	0.05336	0.00066	0.01688	0.00064	338.2	4.2	337.2	3.3	338	13						
Z_Temora2_1	Secondary SRM	38.1	5	7.44E+04	4.11E+03	170.1	0.3797	0.0033	0.5234	0.0078	0.06883	0.00053	0.42424	0.05561	0.00072	0.0212	0.00051	427	5.2	429.1	3.2	423.9	10						
Z_Temora2_2	Secondary SRM	38.1	9	4.63E+04	2.55E+03	109.9	0.3671	0.0047	0.517	0.0082	0.06773	0.00061	0.41437	0.05522	0.00073	0.0206	0.0006	422.7	5.5	422.4	3.7	412	12						
Z_Temora2_3	Secondary SRM	9.6	-45	6.24E+04	3.49E+03	168.8	0.4697	0.0082	0.519	0.016	0.0677	0.0011	0.49666	0.0562	0.0014	0.02065	0.00097	424	10	422.4	6.9	413	19						
Z_Temora2_4	Secondary SRM	38.3	-13	32060	1771	81.5	0.3987	0.0041	0.5257	0.0093	0.06822	0.00064	0.49675	0.0556	0.00084	0.02045	0.00072	428.3	6.2	425.4	3.8	409	14						
Z_Temora2_5	Secondary SRM	27.3	-27	1.11E+05	6.09E+03	294	0.4153	0.0047	0.5202	0.0079	0.06764	0.00065	0.63144	0.05511	0.00063	0.02013	0.00045	424.9	5.3	421.9	3.9	402.9	8.9						
Z_Temora2_6	Secondary SRM	30.0	57	6.22E+04	3.40E+03	177.4	0.6439	0.0116	0.5146	0.0092	0.06835	0.00071	0.45001	0.05511	0.00088	0.0201	0.00042	421.1	6.2	426.2	4.3	402.2	8.2						
Z_Temora2_7	Secondary SRM	38.3	32	31520	1722	95.6	0.5507	0.0070	0.5169	0.0099	0.06813	0.00071	0.37631	0.05518	0.00092	0.02027	0.00062	422.3	6.6	424.8	4.3	405	12						
Z_GJ_1_1	Primary SRM	38.1	-51	2.16E+05	1.30E+04	337	0.0335	0.0003	0.8077	0.0077	0.09713	0.00073	0.60842	0.06022	0.0004	0.0296	0.0014	601	4.4	597.5	4.3	590	27						
Z_GJ_1_2	Primary SRM	32.5	-63	2.21E+05	1.33E+04	342	0.0335	0.0003	0.8143	0.009	0.09762	0.00087	0.67099	0.06044	0.00042	0.0308	0.0015	604.6	5.1	600.4	5.1	613	29						
Z_GJ_1_3	Primary SRM	38.4	-70	2.18E+05	1.30E+04	342	0.0335	0.0004	0.807	0.0086	0.09738	0.00071	0.61439	0.06011	0.00038	0.0306	0.0014	600.4	4.8	599	4.2	608	27						
Z_GJ_1_4	Primary SRM	38.4	-5	2.07E+05	1.23E+04	328	0.0335	0.0004	0.8093	0.009	0.0982	0.00078	0.68297	0.05999	0.00042	0.0296	0.0015	601.7	5.1	603.8	4.6	589	28						
Z_GJ_1_5	Primary SRM	30.0	-4	2.09E+05	1.25E+04	333	0.0333	0.0004	0.8102	0.0093	0.09796	0.00089	0.58969	0.06018	0.00053	0.0297	0.0016	602.9	5.4	602.4	5.2	590	30						
Z_GJ_1_6	Primary SRM	29.4	-67	2.05E+05	1.23E+04	321	0.0340	0.0004	0.8085	0.0094	0.09759	0.00079	0.58756	0.06002	0.00051	0.0302	0.0014	601.3	5.3	600.2	4.6	601	28						
Z_GJ_1_7	Primary SRM	19.6	-13	1.91E+05	1.14E+04	311.4	0.0336	0.0006	0.808	0.013	0.0972	0.0011	0.58372	0.05992	0.00065	0.0302	0.0021	601	7.2	598	6.5	600	42						
Z_GJ_1_8	Primary SRM	38.1	-3	1.97E+05	1.18E+04	322	0.0336	0.0004	0.8092	0.0095	0.09813	0.00085	0.58773	0.06006	0.00056	0.0302	0.0014	602.3	5.5	603.4	5	600	28						
Z_GJ_1_9	Primary SRM	26.3	-45	2.01E+05	1.21E+04	330	0.0334	0.0005	0.8099	0.01	0.09756	0.00097	0.63476	0.06056	0.00056	0.0296	0.0017	602.1	5.8	600	5.7	589	33						
Z_GJ_1_10	Primary SRM	38.1	-34	1.91E+05	1.14E+04	324	0.0337	0.0004	0.8107	0.0097	0.09797	0.00079	0.63731	0.06017	0.00049	0.0297	0.0014	602.4	5.4	602.4	4.6	592	27						
Z_GJ_1_11	Primary SRM	29.1	-79	1.71E+05	1.02E+04	280.8	0.0342	0.0005	0.811	0.011	0.09753	0.00095	0.5688	0.06022	0.00063	0.0308	0.0019	602.6	6	599.9	5.6	612	37						
Z_GJ_1_12	Primary SRM	26.1	-35	1.97E+05	1.17E+04	348	0.0335	0.0005	0.806	0.01	0.0973	0.001	0.66159	0.05973	0.00055	0.0291	0.0016	599.8	5.8	598.3	6.1	579	31						
Z_GJ_1_13	Primary SRM	26.9	-65	1.77E+05	1.07E+04	310	0.0333	0.0005	0.81	0.011	0.09713	0.00092	0.62058	0.06034	0.00058	0.032	0.0019	602.2	6.3	597.5	5.4	636	38						
Z_GJ_1_14	Primary SRM	38.1	15	1.88E+05	1.12E+04	336	0.0355	0.0004	0.8088	0.0096	0.09803	0.00094	0.63276	0.0599	0.00051	0.03	0.0013	601.3	5.4	602.7	5.5	598	25						
Z_GJ_1_15	Primary SRM	38.4	-26	1.85E+05	1.10E+04	332	0.0337	0.0004	0.8095	0.01	0.09791	0.00094	0.68913	0.0599	0.00051	0.0307	0.0015	601.6	5.8	602	5.5	610	30						
Z_GJ_1_16	Primary SRM	38.1	1	1.80E+05	1.08E+04	343	0.0332	0.0004	0.8073	0.0093	0.09667	0.00092	0.61742	0.06004	0.00048	0.0306	0.0016	601.1	5.1	594.8	5.4	609	31						
Z_GJ_1_17	Primary SRM	33.1	34	1.75E+05	1.04E+04	323	0.0334	0.0005	0.8109	0.01	0.09764	0.0009	0.64405	0.05988	0.0005	0.0291	0.0017	602.5	5.6	600.5	5.3	579	33						
Z_GJ_1_18	Primary SRM	12.3	61	1.54E+05	9.26E+03	270.7	0.0336	0.0006	0.811	0.014	0.0974	0.0013	0.6572	0.06037	0.00079	0.0312	0.0025	602.8	8	599.3	7.7	621	49						
Z_GJ_1_19	Primary SRM	24.4	80	1.56E+05	9.30E+03	290.8	0.0342	0.0006	0.809	0.012	0.0981	0.0012	0.67784	0.06016	0.00067	0.0282	0.0019	601.7	6.9	603.1	6.9	562	37						
Z_GJ_1_20	Primary SRM	16.5	67	2.00E+05	1.19E+04	424	0.0327	0.0007	0.807	0.015	0.0981	0.0013	0.49511	0.05982	0.00082	0.0313	0.002	600.4	8.3	602.9	7.7	623	39						
Z_GJ_1_21	Primary SRM	26.3	54	1.74E+05	1.04E+04	339	0.0330	0.0005	0.81	0.012	0.0978	0.0011	0.56467	0.06035	0.00074	0.0308	0.0015	602.2	7	601.2	6.4	613	29						
Z_GJ_1_22	Primary SRM	38.3	3	1.63E+05	9.86E+03	348	0.0332	0.0004	0.8111	0.0097	0.09718	0.00093	0.51191	0.06061	0.00059	0.0304	0.0017	602.7	5.4	597.8	5.5	605	34						
Z_GJ_1_23	Primary SRM	38.4	-17	1.67E+05	9.97E+03	358	0.0337	0.0004	0.804	0.011	0.09723	0.001	0.67181	0.06012	0.00055	0.0302	0.0014	598.2	6.1	598.1	5.9	601	28						
Z_GJ_1_24	Primary SRM	29.4	-40	1.68E+05	1.01E+04	353	0.0335	0.0005	0.813	0.012	0.0984	0.0012	0.68566	0.06038	0.00061	0.0292	0.0015	603.8	6.7	604.9	6.9	581	30						

* KPT04-36-Grain 12c shown in Figure 3

Measurements in Italic are not plotted in figures 1 and 2 due to common Pb

Table ESI 2: ID-TIMS data

	Compositional Parameters							Radiogenic Isotope Ratios								Isotopic ages, Ma							
Sample (a)	Wt. mg (b)	U ppm (c)	Th/U (d)	Pb ppm (c)	Pb*/Pb_c (e)	Pb_c (pg) (e)	$^{206}Pb/^{204}Pb$ (f)	$^{208}Pb/^{206}Pb$ (g)	$^{207}Pb/^{206}Pb$ (g)	2 sigma % err (h)	$^{207}Pb/^{235}U$ (g)	2 sigma % err (h)	$^{206}Pb/^{238}U$ (g)	2 sigma % err (h)	corr. coef.	$^{207}Pb/^{206}Pb$ (i)	2 sigma ± (h)	$^{207}Pb/^{235}U$ (i)	2 sigma ± (h)	$^{206}Pb/^{238}U$ (i, j)	2 sigma ± (h)	$^{206}Pb/^{238}U$ (l, k)	2 sigma ± (i)
KPT-04																							
KPT014-13-1	0.0084	937	0.167	0.40	0.04	3.19	21.467	0.102	0.046144	44.1	0.000216	47.2	0.0000340	8.59	0.44	5.13971	847	0.22	0.10	0.219	0.010	0.203	0.015
KPT014-13-2	0.0069	1119	0.432	0.13	0.19	0.78	29.065	0.264	0.046053	31.5	0.000202	33.6	0.0000317	2.86	0.75	0.38683	606	0.20	0.07	0.205	0.003	0.187	0.011
KPT014-13-3	0.0084	933	0.398	0.25	0.10	1.92	24.394	0.216	0.046090	35.3	0.000237	37.7	0.0000373	3.99	0.63	2.35379	703	0.24	0.09	0.241	0.006	0.229	0.015
KPT014-13-6	0.0077	557	0.859	0.25	0.16	1.66	27.094	0.348	0.046145	41.0	0.000412	42.5	0.0000647	2.62	0.58	5.21123	899	0.42	0.18	0.417	0.009	0.410	0.027
KPT014-13-8	0.0065	1032	0.551	0.28	0.11	1.62	24.779	0.287	0.046054	39.8	0.000241	42.0	0.0000379	3.57	0.65	0.45121	801	0.24	0.10	0.244	0.005	0.230	0.019
KPT014-13-7	0.0058	717	0.370	0.24	0.10	1.24	24.374	0.186	0.046054	65.6	0.000269	68.1	0.0000424	4.10	0.63	0.44763	1334	0.27	0.19	0.273	0.007	0.262	0.016
KPT014-13-10	0.0058	1693	0.586	0.28	0.15	1.41	26.631	0.339	0.046112	33.1	0.000206	34.9	0.0000325	2.83	0.66	3.48032	646	0.21	0.07	0.209	0.003	0.190	0.017

(a) z1, z2 etc. are labels for fractions composed of single zircon grains or fragments; all fractions annealed and chemically abraded after Mattinson (2005).

(b) Nominal fraction weights measured after chemical abrasion.

(c) Nominal U and total Pb concentrations subject to uncertainty in weighting zircons.

(d) Model Th/U ratio calculated from radiogenic $^{208}Pb/^{206}Pb$ ratio and $^{207}Pb/^{235}U$ age.

(e) Pb* and Pbc represent radiogenic and common Pb, respectively; mol % ^{206}Pb* with respect to radiogenic, blank and initial common Pb.

(f) Measured ratio corrected for spike and fractionation only. Mass fractionation correction of 0.11 ± 0.02 (1-sigma) %/amu (atomic mass unit) was applied to all single-collector Daly analyses, based on analysis of NBS-981 and NBS-982.

(g) Corrected for fractionation, spike, and common Pb; all common Pb was assumed to be procedural blank: $^{206}Pb/^{204}Pb$ = 18.30 ± 0.26%; $^{207}Pb/^{204}Pb$ = 15.47± 0.32%; $^{208}Pb/^{204}Pb$ = 37.60 ± 0.74% (all uncertainties 1-sigma). $^{206}Pb/^{238}U$ and $^{207}Pb/^{206}Pb$ ratios corrected for initial disequilibrium in $^{230}Th/^{238}U$ using Th/U [magma] = 3.3 (KPT04),

(h) Errors are 2-sigma, propagated using the algorithms of Schmitz and Schoene (2007) and Crowley et al. (2007).

(i) Calculations are based on the decay constants of Jaffey et al. (1971). $^{206}Pb/^{238}U$ and $^{207}Pb/^{206}Pb$ ages corrected for initial disequilibrium in $^{230}Th/^{238}U$ using Th/U [magma]

(j) Disequilibrium U-Th corrected after Schärer, 1984 .

(k) Disequilibrium U-Th corrected after Sakata *et al., 2013* .

Derivation of the advance Th disequilibrium correction

The distribution ratio D of U and Th between source magma and zircon is defined as follows:

$$D^{U}_{Zircon/Source\ Magma} = \frac{U^{\ Initial}_{\ Zircon}}{U^{\ Initial}_{\ Source\ Magma}} \qquad (ESI\ 1)$$

$$D^{Th}_{Zircon/Source\ Magma} = \frac{Th^{\ Initial}_{\ Zircon}}{Th^{\ Initial}_{\ Source\ Magma}} \qquad (ESI\ 2)$$

where initial represents the time of zircon formation. Now, as $f_{Th/U}$ represent the ratio of the D of U and Th, respectively between source magma and zircon crystal, the f is defined as follows:

$$f_{Th/U} = \frac{D^{\ Th}_{\ Zircon/SourceMagma}}{D^{\ U}_{\ Zircon/SourceMagma}} \qquad (ESI\ 3)$$

According to Schärer (1984), by means of using $f_{Th/U}$, it is possible to calculate the time variation of $^{206}Pb/^{238}U$ ratio considering the effect of initial disequilibrium. This relationship is expressed with following equation:

$$\frac{^{206}Pb}{^{238}U} = \left(e^{\lambda_{238}\, t} - 1\right) + \frac{\lambda_{238}}{\lambda_{230}}\left(f_{Th/U} - 1\right) \qquad (1)$$

However, although the growth of $^{206}Pb/^{238}U$ ratio can still be calculated after ^{230}Th reaches radioactive equilibrium using equation (1), this equation cannot do accurate correction in the scope of time before reaching equilibrium (up until about 0.3 Ma for 230Th).

In fact, the isotopic growth curve defined from equation (1) does not pass the origin point when t = 0 ($^{206}Pb^* = 0$). Therefore, for the chronology of the zircon crystals with the age of less than 1 Ma, a more accurate correction has to be applied.

We assume the following conditions here:

(a) Radioactive equilibrium of the uranium decay series has been established in the source magma from which the zircon crystallizes.

(b) $^{234}U/^{238}U$ ratio is the same in zircons and source magma (^{234}U and ^{238}U hold the radioactive equilibrium).

(c) Initial lead content (taken to zircon crystal from source magma at the time of zircon formation) can be regarded ($Pb^*_{initial} = 0$).

Because the radioactive equilibrium is established in the source magma (assumption (a)), the following relationship holds:

$$^{238}U^{Initial}_{SourceMagma}\,\lambda_{238} = \,^{234}U^{Initial}_{SourceMagma}\,\lambda_{234} = \,^{230}Th^{Initial}_{SourceMagma}\,\lambda_{230} \qquad (ESI\ 4)$$

In addition, considering assumption (b) and (c), relationship about ^{238}U, ^{234}U, and ^{206}Pb in zircon crystal is expressed as follows:

$$^{238}U^{Initial}_{Zircon}\,\lambda_{238} = \,^{234}U^{Initial}_{Zircon}\,\lambda_{234} \qquad (ESI\ 5)$$

$$^{206}Pb^{Initial}_{Zircon} = 0 \qquad (ESI\ 6)$$

The following relationship is established in radiogenic ^{206}Pb and ^{230}Th at the age t.

$$\frac{d\,^{230}Th_{Zircon}}{dt} = \,^{234}U_{Zircon}\,\lambda_{234} - \,^{230}Th_{Zircon}\,\lambda_{230} \qquad (ESI\ 7)$$

$$\frac{d\,^{206}Pb^{*}_{Zircon}}{dt} = \,^{230}Th_{Zircon}\,\lambda_{230} \qquad (ESI\ 8)$$

After solving equation (ESI 1) – (ESI 8) and using the approximation of $\lambda_{230} - \lambda_{238} \cong \lambda_{230}$, we can finally get the following equation that represents the relationship between the $^{206}Pb/^{238}U$ ratio and age t.

$$\frac{^{206}Pb^{*}_{Zircon}}{^{238}U_{Zircon}} = \left(e^{\lambda_{238}\,t} - 1\right) + \frac{\lambda_{238}}{\lambda_{230}}\left(f_{\frac{Th}{U}} - 1\right)\left(1 - e^{-\lambda_{230}\,t}\right)e^{\lambda_{238}\,t} \qquad (3)$$

Figure ESI 1: Evaluation of common Pb on example KPT04-24 (17. April 2013):

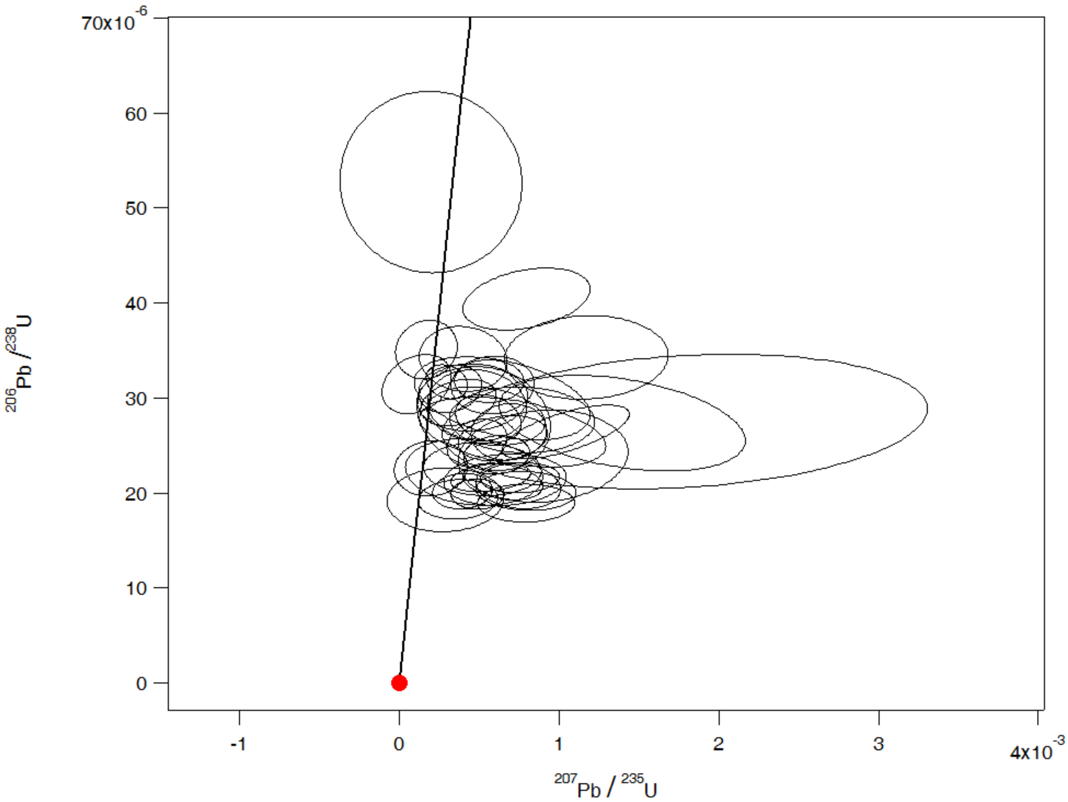

Figure ESI 2: Evaluation of common Pb on example KPT04-36 (17. April 2013) Inherited core not shown:

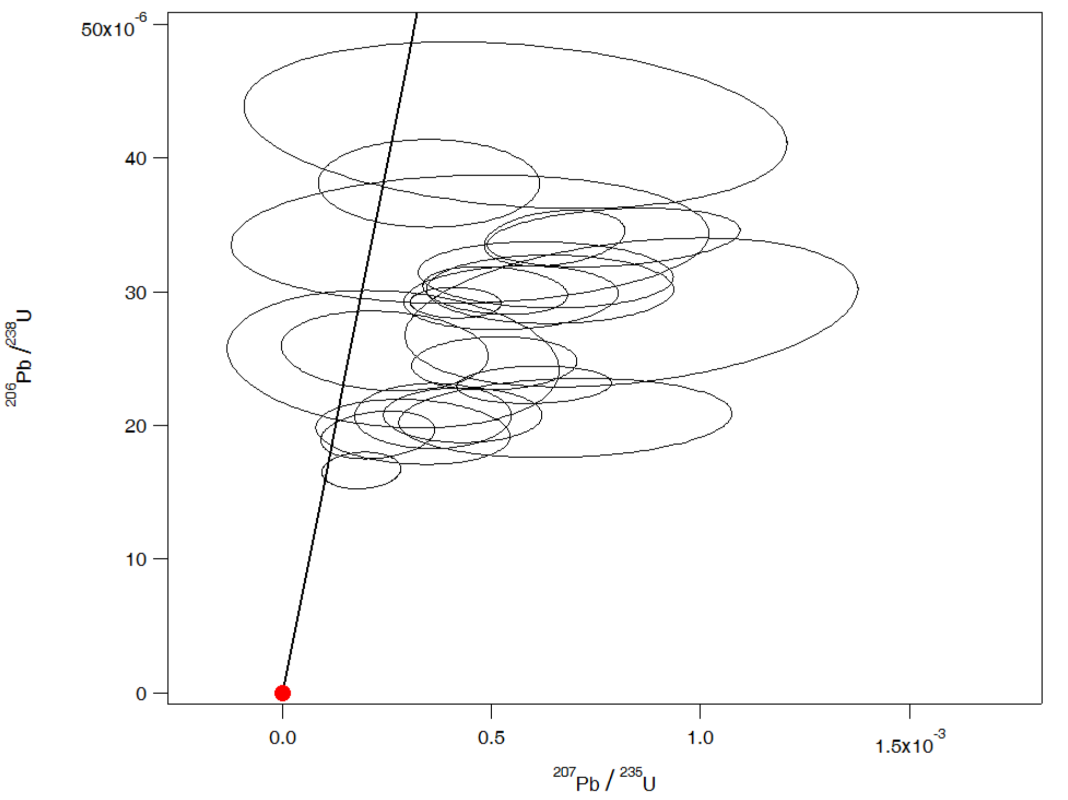

Figure ESI 3: Evaluation of common Pb on example KPT04-24 (01. February 2013):

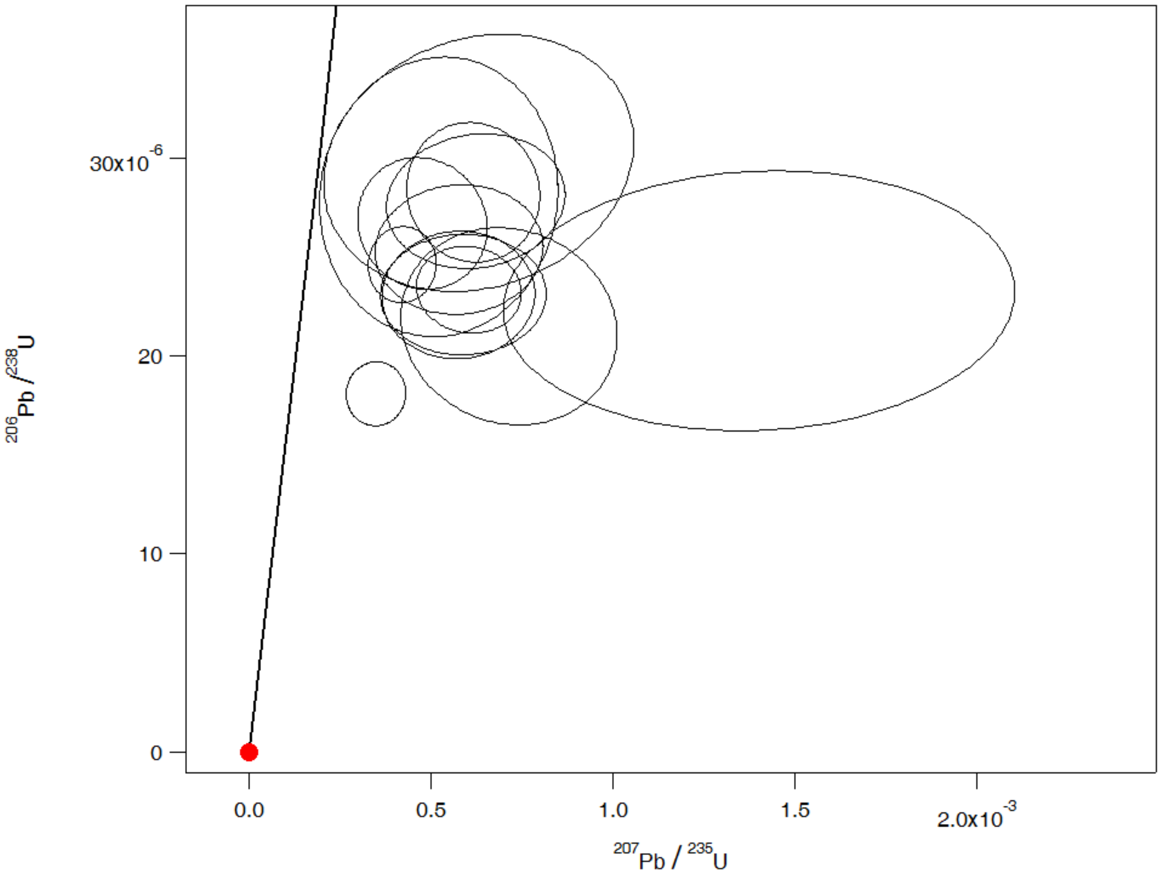

Figure ESI 4: Evaluation of common Pb on example KPT04-36 (01. February 2013) Inherited core not shown:

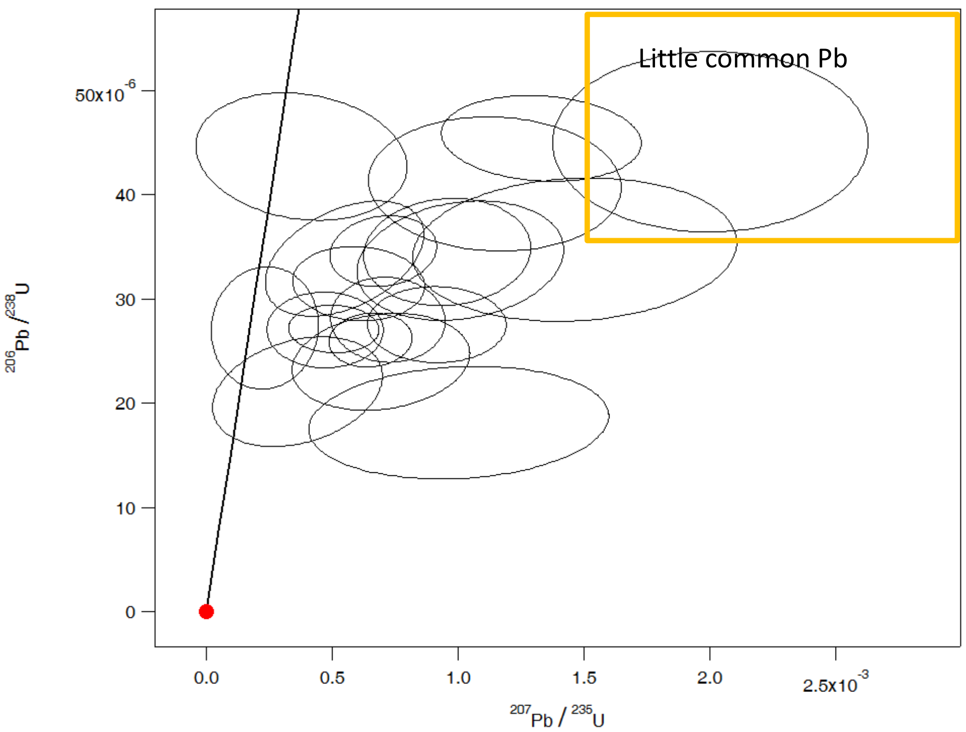

Figure ESI 5: Evaluation of common Pb on example NS07:

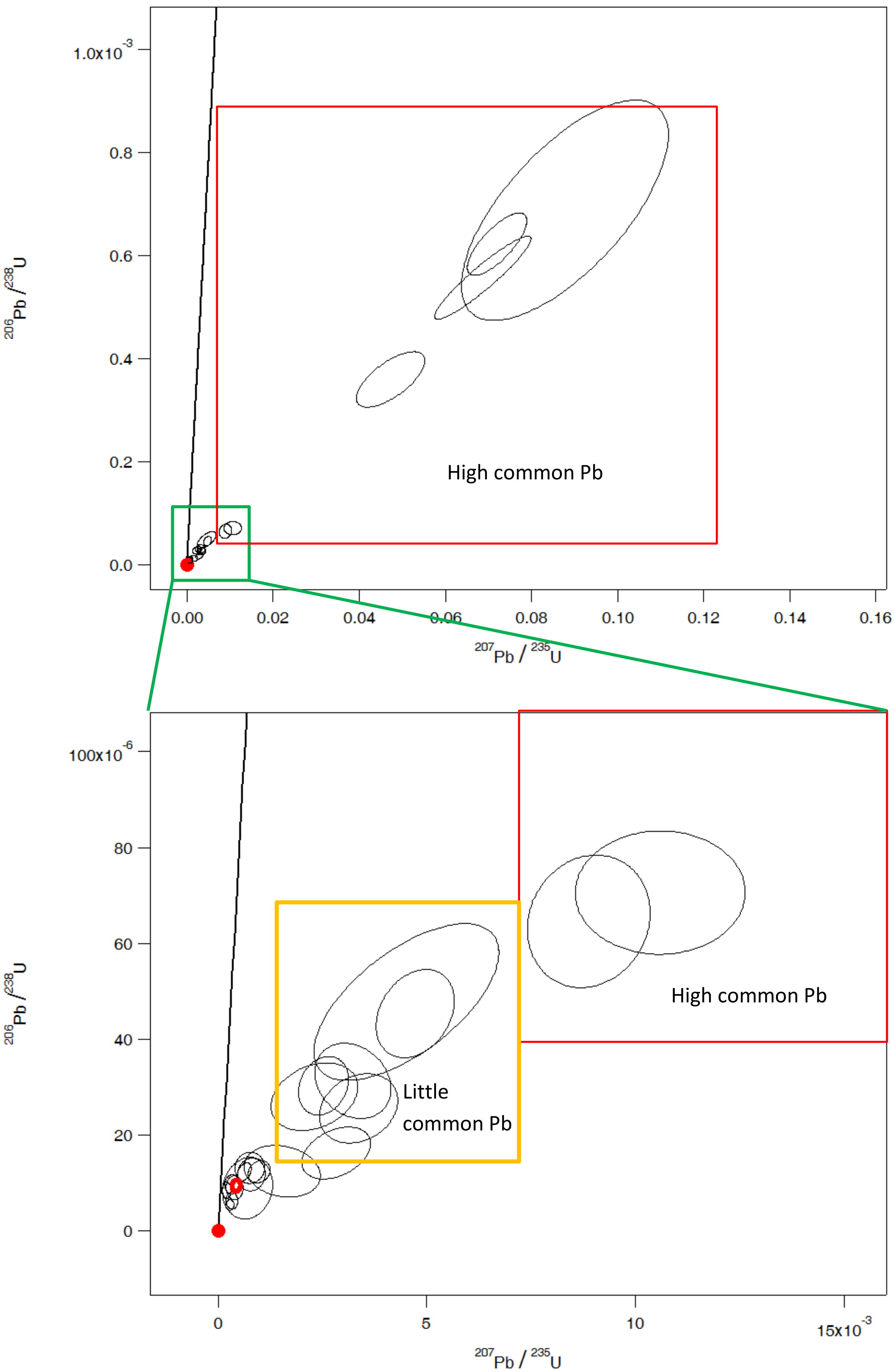

Figure ESI 6: Evaluation of common Pb on example NS24:

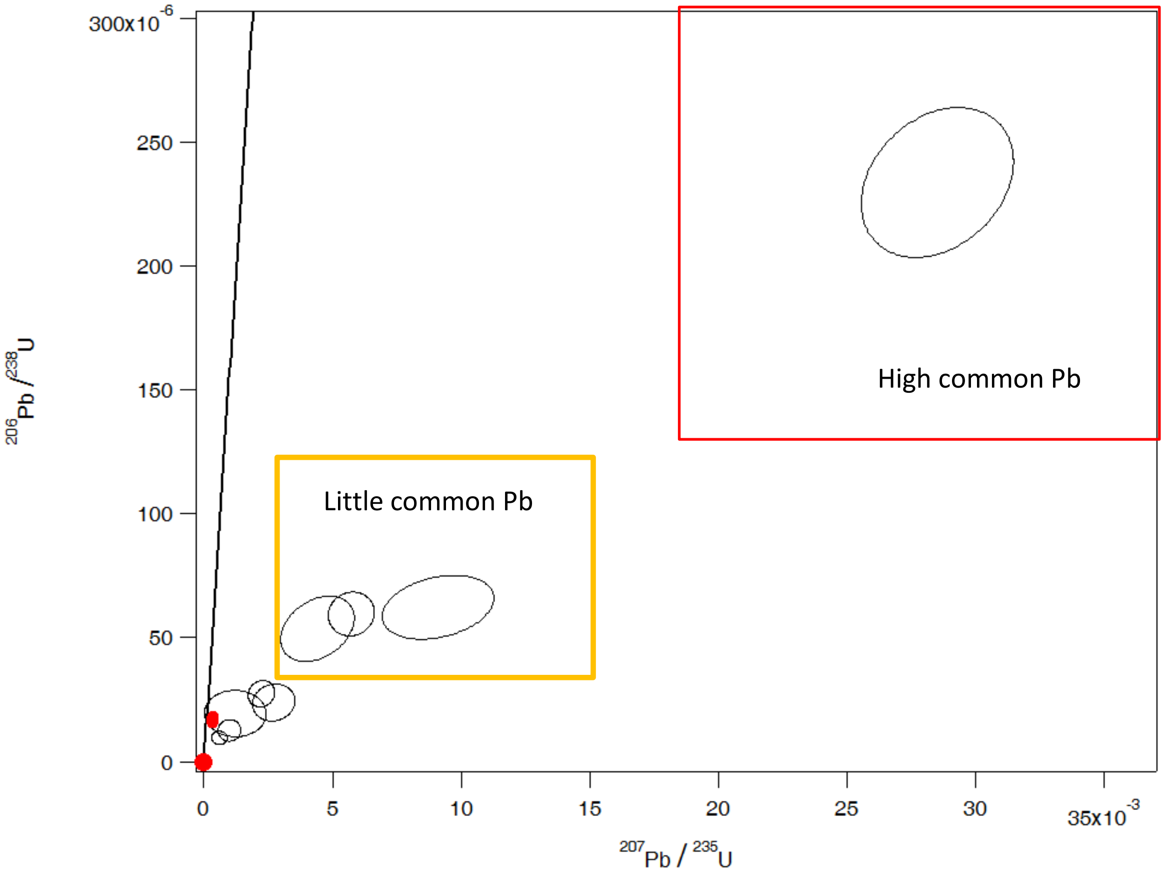

Figure ESI 7: Evaluation of common Pb on example NISP2(1):

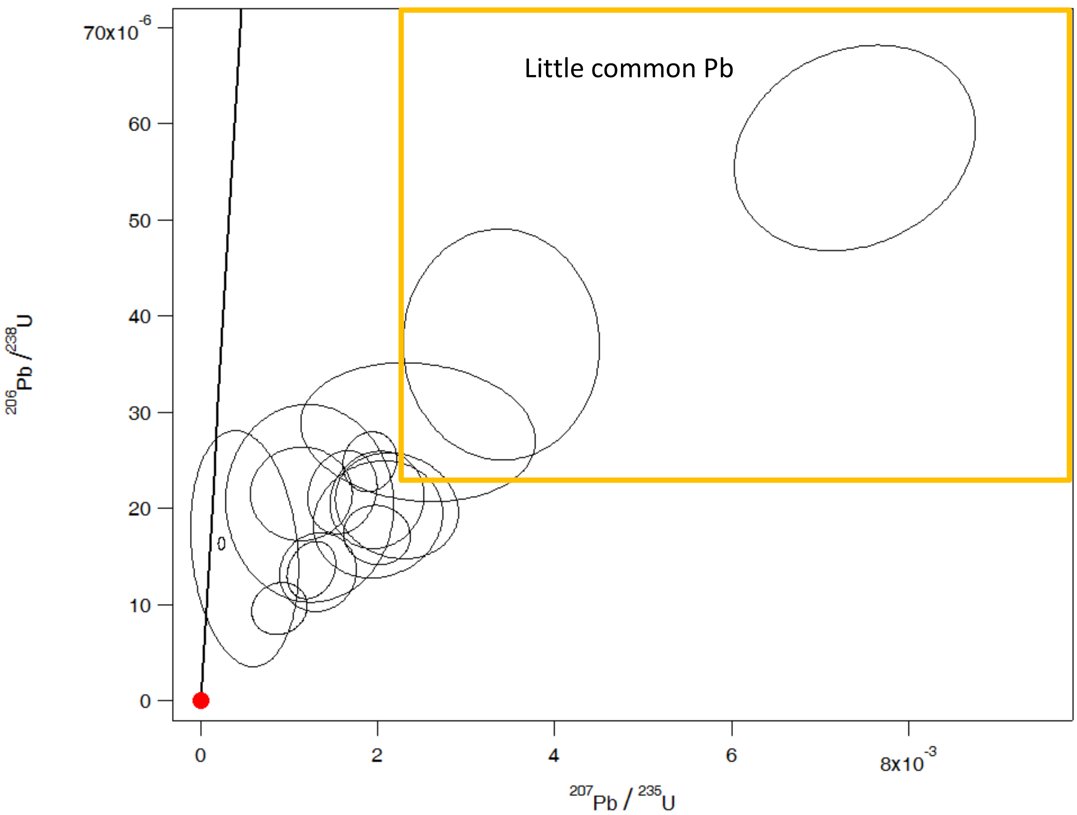

Figure ESI 8 Probability plot of all KOS ages (SHRIMP, ID-TIMS and LA-ICP-MS) does not show a normal distribution.

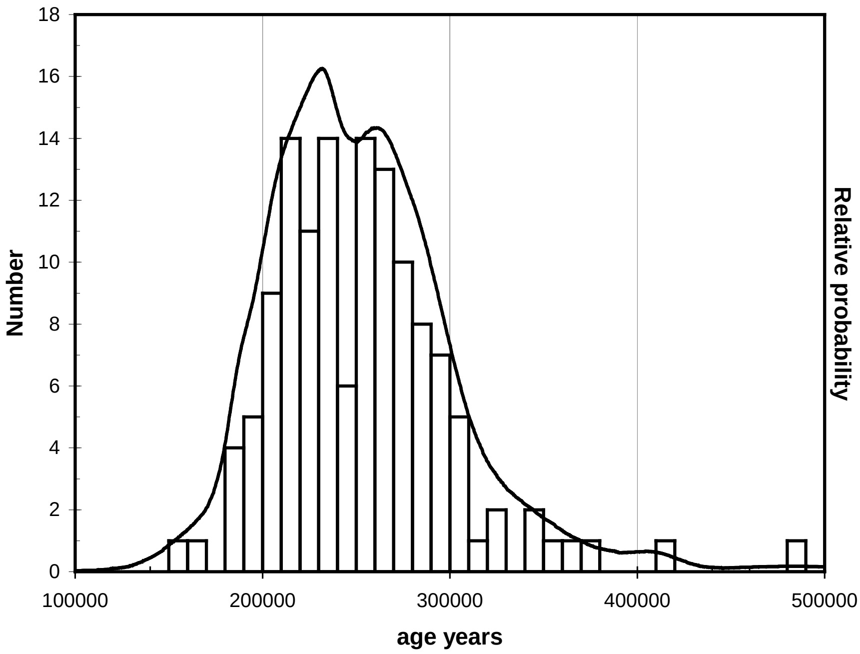

Figure ESI 9: All ages for the KOS sample together showing continuous crystallization over 140ka. The calculation of a mean age seems meaningless.