

Table 1. U-Pb data, Heidal

Characteristics <sup>1)</sup>	Weight	U	Th(U) <sup>3)</sup>	Pbc <sup>4)</sup>	<sup>206</sup> Pb/ <sup>204</sup> Pb <sup>5)</sup>	<sup>207</sup> Pb/ <sup>235</sup> U <sup>6)</sup>	2 σ	<sup>206</sup> Pb/ <sup>238</sup> U <sup>6)</sup>	2 σ	rho	<sup>207</sup> Pb/ <sup>206</sup> Pb <sup>6)</sup>	2 σ	<sup>206</sup> Pb/ <sup>238</sup> U <sup>6)</sup>	2 σ	<sup>207</sup> Pb/ <sup>235</sup> U <sup>6)</sup>	2 σ	<sup>207</sup> Pb/ <sup>206</sup> Pb <sup>6)</sup>	2 σ	D <sup>7)</sup>	
																				[ug] <sup>2)</sup>
<b>65 -- C-14-65 amphibolite (61°37.809 / 9°17.524)</b>																				
Z an sp CA [1]	1	289	0.81	0.00	0.3	9592	1.490	0.006	0.152890	0.00052	0.93	0.070692	0.000106	917.1	2.9	926.4	2.4	948.5	3.1	3.5
Z an eq CA [1]	9	526	0.20	0.00	0.7	59201	1.403	0.003	0.14743	0.00031	0.96	0.069014	0.000051	886.5	1.7	890.2	1.4	899.2	1.5	1.5
Z an eq CA [1]	6	566	0.23	0.02	2.2	14463	1.391	0.003	0.14641	0.00029	0.95	0.068930	0.000052	880.8	1.6	885.3	1.4	896.7	1.6	1.9
Z an eq CA [1]	7	509	0.23	0.00	0.7	49616	1.374	0.003	0.14484	0.00030	0.94	0.068802	0.000061	872.0	1.7	877.9	1.4	892.8	1.8	2.5
Z an eq CA [1]	1	398	0.47	0.00	0.9	3868	1.323	0.007	0.14028	0.00061	0.92	0.06839	0.00014	846.2	3.5	855.7	2.9	880.3	4.2	4.1
T fr pb NA [1]	50	10	0.04	1.73	89	40	0.464	0.065	0.06561	0.00105	0.03	0.0513	0.0072	409.7	6.5	387.4	43.9	256.2	293	-62
T fr pb NA [1]	66	11	0.00	1.98	132	42	0.468	0.068	0.06670	0.00104	0.11	0.0509	0.0073	416.3	6.4	389.9	45.7	236.5	301	-78
<b>26 -- C-15-26 banded gneiss (61°47.427 / 9°16.176)</b>																				
Z an eq CA [9]	9	153	0.36	0.03	2.3	6554	1.829	0.006	0.17287	0.00041	0.85	0.07674	0.00013	1027.9	2.3	1056.0	2.0	1114.5	3.3	8.4
Z eu sp CA [1]	23	218	0.71	0.00	1.1	43649	1.538	0.004	0.15529	0.00033	0.95	0.071807	0.000057	930.6	1.9	945.5	1.5	980.5	1.6	5.5
Z an eq CA [1]	25	125	0.13	0.00	1.5	20265	1.513	0.004	0.15152	0.00032	0.94	0.072424	0.000064	909.5	1.8	935.7	1.5	997.9	1.8	9.5
Z eu tip CA [1]	23	207	0.61	0.00	1.9	23854	1.446	0.004	0.14994	0.00032	0.95	0.069957	0.000056	900.6	1.8	908.3	1.5	927.1	1.6	3.1
Z an eq CA CL* [1]	19	205	0.65	0.00	2.2	16027	1.414	0.004	0.14741	0.00031	0.95	0.069553	0.000057	886.4	1.8	894.7	1.5	915.2	1.7	3.4
Z an eq CA CL-D* [1]	19	284	0.52	0.00	1.0	47665	1.389	0.003	0.14550	0.00030	0.96	0.069214	0.000049	875.7	1.7	884.1	1.4	905.1	1.5	3.5
<b>9C -- VP9C leucocratic gneiss (plateau just west of Heidalsmuen)</b>																				
Z an fr CA [1]	19	26	0.39	0.04	2.9	1976	1.942	0.007	0.18254	0.00041	0.75	0.07716	0.00018	1080.9	2.2	1095.7	2.3	1125.4	4.7	4.3
Z an sp CA [1]	11	67	0.40	0.00	1.7	4275	1.607	0.005	0.16164	0.00036	0.85	0.07212	0.00011	965.9	2.0	973.0	1.8	989.3	3.1	2.5
Z an tip CA [1]	65	47	0.42	0.00	1.5	20920	1.612	0.008	0.15933	0.00072	0.98	0.073388	0.000063	953.1	4.0	975.0	2.9	1024.7	1.7	7.5
Z an tip CA [1]	14	79	0.27	0.00	1.7	6249	1.528	0.004	0.15629	0.00031	0.86	0.070908	0.000094	936.2	1.7	941.7	1.6	954.8	2.7	2.1
Z sb sp CA [1]	17	85	0.44	0.15	4.7	2775	1.385	0.004	0.14466	0.00030	0.86	0.069428	0.000098	870.9	1.7	882.5	1.6	911.5	2.9	4.8
Z an tip CA [1]	108	66	0.41	0.01	2.8	22649	1.388	0.003	0.14306	0.00028	0.96	0.070361	0.000048	861.9	1.6	883.8	1.3	938.9	1.4	8.8
<b>66 -- C-14-66 felsic gneiss (61°37.832 / 9°17.523)</b>																				
Z an fr CA [1]	7	209	0.24	0.00	0.8	22677	2.273	0.006	0.19307	0.00042	0.91	0.085396	0.000093	1138.0	2.3	1204.0	1.8	1324.6	2.1	15.4
Z sb sp CA [1]	4	313	0.29	0.00	1.5	9865	2.066	0.005	0.18438	0.00037	0.93	0.081253	0.000077	1090.9	2.0	1137.5	1.7	1227.6	1.8	12.1
Z sb tip CA [1]	10	316	0.19	0.00	0.7	45457	1.850	0.004	0.17059	0.00034	0.95	0.078646	0.000059	1015.4	1.9	1063.4	1.5	1163.2	1.5	13.7
Z sb tip CA [1]	1	941	0.13	0.00	0.7	13047	1.544	0.005	0.15696	0.00045	0.89	0.07135	0.00011	939.9	2.5	948.1	2.1	967.4	3.2	3.1
<b>31 -- C-15-31 garnet pegmatite (61°47.039, 9°15.951)</b>																				
Z sb tip fr CA CL-G1	14	98	0.33	0.00	2.9	4828	1.733	0.004	0.16893	0.00034	0.92	0.074412	0.000075	1006.2	1.9	1020.9	1.6	1052.7	2.0	4.8
Z sb tip fr CA CL-G2	17	96	0.29	0.00	1.2	13573	1.625	0.004	0.16337	0.00033	0.94	0.072126	0.000061	975.5	1.8	979.8	1.5	989.5	1.7	1.5
Z sb tip CA CL-E1* [1]	183	95	0.35	0.00	2.1	85477	1.612	0.004	0.16256	0.00037	0.96	0.071919	0.000055	971.0	2.0	974.9	1.6	983.6	1.5	1.4
Z an eq CA CL-F1* [1]	10	102	0.37	0.00	1.0	9544	1.532	0.004	0.15709	0.00033	0.84	0.070733	0.000105	940.6	1.8	943.3	1.7	949.7	3.0	1.0
Z sb silice CA CL-E2	77	114	0.35	0.03	4.5	18517	1.483	0.004	0.15242	0.00034	0.96	0.070552	0.000054	914.5	1.9	923.3	1.5	944.4	1.6	3.4
Z an eq CA CL-F2* [1]	45	125	0.38	0.00	1.3	39135	1.445	0.003	0.14948	0.00030	0.96	0.070130	0.000049	898.1	1.7	908.0	1.4	932.2	1.4	3.9
Z fr CA [1]	17	102	0.35	0.00	1.7	9412	1.439	0.004	0.14987	0.00032	0.91	0.069629	0.000075	900.3	1.8	905.2	1.5	917.4	2.2	2.0
Z sb tip CA [1]	50	129	0.40	0.00	1.6	38608	1.445	0.003	0.15101	0.00030	0.96	0.069395	0.000046	906.6	1.7	907.8	1.3	910.5	1.4	0.5
Z fr CA [1]	8	93	0.35	0.00	0.8	8261	1.400	0.005	0.14642	0.00041	0.87	0.06935	0.00012	880.9	2.3	889.0	2.0	909.2	3.5	3.3
Z fr CA [1]	3	161	0.39	0.00	0.7	6688	1.425	0.005	0.14952	0.00037	0.90	0.06911	0.00010	898.3	2.1	899.3	2.0	902.0	3.1	0.4
<b>30 -- C-15-30 granite, Rudihøe (61°47.039, 9°15.951)</b>																				
Z sb sp CA [1]	8	745	0.27	0.08	2.6	30515	2.567	0.006	0.21540	0.00045	0.96	0.086431	0.000060	1257.5	2.4	1291.3	1.7	1347.8	1.3	7.4
Z sb eq CA [1]	6	585	0.23	0.21	3.3	11275	1.783	0.004	0.16941	0.00036	0.94	0.076329	0.000064	1008.9	2.0	1039.2	1.6	1103.7	1.7	9.3
Z sb sp CA [1]	2	1387	0.18	0.00	0.9	30950	1.693	0.004	0.16623	0.00034	0.95	0.073878	0.000058	991.3	1.9	1006.0	1.5	1038.1	1.6	4.9
<b>36 -- C-15-36 garnet-mica schist Storhø (61°43.130, 9°14.083)</b>																				
Z tip AA [1]	1	147	0.40	0.00	1.3	1484	4.552	0.014	0.21628	0.00056	0.90	0.15264	0.00021	1262.2	3.0	1740.5	2.6	2375.7	2.3	51.5
Z tip AA [1]	1	701	0.46	0.00	1.0	8692	2.350	0.007	0.19476	0.00049	0.92	0.08752	0.00010	1147.1	2.7	1227.6	2.1	1372.0	2.3	17.9
Z tip AA [1]	1	124	0.29	0.00	1.0	1246	1.842	0.008	0.16658	0.00055	0.79	0.08019	0.00022	993.2	3.1	1060.5	2.9	1201.8	5.4	18.7
Z ip-fr AA [1]	1	110	0.38	0.00	2.9	305	1.232	0.012	0.12301	0.00053	0.49	0.07265	0.00063	747.8	3.0	815.3	5.6	1004.3	17.5	27.0
Z ip-fr AA [1]	1	240	0.53	0.00	0.7	2720	1.202	0.004	0.12573	0.00030	0.83	0.06931	0.00012	763.5	1.7	801.3	1.8	908.0	3.6	16.9
Z tip AA [1]	1	961	0.23	0.00	0.7	6858	0.724	0.004	0.08678	0.00040	0.92	0.06050	0.00012	536.5	2.4	553.0	2.2	621.5	4.2	14.3
R an NA [14]	25	7	0.15	0.56	19.5	57	0.610	0.035	0.07595	0.00058	0.11	0.05828	0.00336	471.9	3.5	484	22	540.4	121	13
R an NA [2]	20	6	0.15	2.09	46.6	29	0.488	0.129	0.07255	0.00202	0.04	0.049	0.013	451.5	12.4	404	85	138.2	526	-235
R an NA [14]	30	8	0.16	1.07	37.2	49	0.575	0.052	0.07295	0.00078	0.15	0.0572	0.0051	453.9	4.8	462	33	499.6	184	9
R an NA [5]	11	7	0.17	0.82	14.6	40	0.517	0.065	0.07147	0.00093	0.23	0.0525	0.0065	445.0	5.7	423	43	305.2	259	-47

**37 -- C-15-37 garnet-mica schist, east of Kvernbrusætrin**

Z b-op AA [1]	1	817	0.48	0.00	1.6	5588	3.677	0.009	0.18008	0.00040	0.95	0.148110	0.000121	1067.4	2.2	1566.5	2.0	2324.2	1.4	58.5
Z b-op AA [1]	6	650	0.10	1.31	13.5	1744	1.321	0.004	0.09764	0.00021	0.89	0.098091	0.000121	600.6	1.2	854.8	1.5	1588.1	2.3	65.0
Z b-op AA [1]	8	980	0.15	3.11	30.1	1429	0.758	0.002	0.08860	0.00019	0.75	0.062047	0.000134	547.3	1.1	572.9	1.4	675.7	4.6	19.8
Z b-op AA [1]	1	3584	0.27	0.00	5.2	3194	0.603	0.002	0.07608	0.00020	0.91	0.057497	0.000075	472.7	1.2	479.2	1.2	510.6	2.8	7.7
R eu sb NA [9]	13	2	1.16	0.63	13.8	29	0.593	0.127	0.07731	0.00191	0.11	0.056	0.012	480.0	11.6	473	78	436.4	415	-10
R eu sb NA [9]	11	1	0.33	0.08	6.6	30	0.707	0.158	0.07633	0.00241	0.17	0.067	0.015	474.2	14.4	543	90	843.2	401	45

**64 -- C-14-64 tonalite Murudalen (61°36.842 / 9°15.430)**

Z eu tip CA [1]	11	180	0.30	0.00	1.0	13598	1.191	0.003	0.11157	0.00025	0.89	0.077453	0.000097	681.9	1.4	796.6	1.5	1132.9	2.5	41.9
Z eu lp fr CA [3]	2	915	0.33	0.00	5.1	2179	0.945	0.003	0.09826	0.00023	0.85	0.06978	0.00011	604.2	1.4	675.7	1.5	921.9	3.3	36.1
Z eu tip CA [1]	16	187	0.73	0.00	1.4	8852	0.534	0.002	0.06959	0.00027	0.94	0.055608	0.000086	433.7	1.6	434.2	1.6	436.7	3.4	0.7
Z eu sp AA [1]	1	577	0.50	0.00	1.0	2494	0.534	0.002	0.06911	0.00024	0.90	0.05599	0.00011	430.8	1.5	434.1	1.5	451.9	4.3	4.8
Z eu tip AA [1]	1	624	0.13	0.00	0.6	4752	0.524	0.002	0.06842	0.00024	0.91	0.055531	0.000096	426.6	1.4	427.7	1.4	433.7	3.8	1.7

**23 -- C-16-23 granite dyke Rekefjell (N61.64609 E9.16805)**

Z eu tip CA [1]	19	329	0.27	0.00	0.8	41379	0.729	0.002	0.08582	0.00019	0.93	0.061649	0.000063	530.8	1.2	556.2	1.2	662.0	2.2	20.6
Z eu sp CA [1]	1	788	0.09	0.00	1.8	1894	0.528	0.003	0.06881	0.00026	0.86	0.05569	0.00014	429.0	1.6	430.7	1.7	440.1	5.5	2.6
Z eu tip CA [1]	3	931	0.05	0.00	1.2	9982	0.527	0.002	0.06874	0.00018	0.87	0.055556	0.000092	428.6	1.1	429.5	1.2	434.7	3.7	1.5
Z eu lp fr CA [1]	1	1917	0.05	0.00	1.5	5490	0.525	0.002	0.06865	0.00017	0.89	0.055493	0.000077	428.0	1.0	428.6	1.0	432.1	3.1	1.0

**6 -- VP6 granite (61° 38.399'N 9° 18.382'E)**

Z eu eq b AA [1]	1	7043	0.13	0.00	1.8	42320	1.722	0.005	0.17062	0.00041	0.97	0.073219	0.000050	1015.5	2.2	1016.9	1.7	1020.0	1.4	0.5
Z fr CA [1]	13	268	0.40	0.06	2.9	12895	1.705	0.004	0.16924	0.00034	0.95	0.073078	0.000055	1007.9	1.9	1010.5	1.5	1016.1	1.5	0.9
Z eu tip CA [1]	14	173	0.36	0.02	2.3	9475	1.386	0.004	0.14347	0.00030	0.92	0.070072	0.000072	864.3	1.7	883.1	1.5	930.5	2.1	7.6
Z lp-tip CA [1]	6	205	0.22	0.00	1.7	6286	1.345	0.004	0.13905	0.00028	0.84	0.07017	0.00010	839.3	1.6	865.6	1.6	933.5	3.1	10.8
Z tip CA [1]	57	108	0.54	0.01	2.8	17832	1.225	0.003	0.12948	0.00028	0.96	0.068636	0.000051	784.9	1.6	812.2	1.4	887.8	1.5	12.3
Z sp CA [1]	5	514	0.20	0.21	3.1	5647	0.972	0.003	0.10730	0.00028	0.83	0.06570	0.00013	657.1	1.6	689.5	1.7	796.8	4.1	18.4
Z sp CA [1]	1	82	0.35	0.00	1.3	408	0.942	0.016	0.10372	0.00123	0.73	0.06584	0.00077	636.1	7.2	673.7	8.4	801.4	24	21.7
Z tip CA [1]	9	105	0.23	0.38	5.6	1059	0.873	0.003	0.09847	0.00020	0.66	0.06430	0.00018	605.5	1.2	637.2	1.7	751.6	5.8	20.4
Z eu sp pk AA [1]	1	1441	0.31	0.00	1.5	4954	0.730	0.002	0.08270	0.00023	0.87	0.06401	0.00011	512.2	1.4	556.5	1.5	741.9	3.5	32.2
T fr br NA [1]	4	419	0.13	####	94.2	93	0.522	0.019	0.06848	0.00032	0.02	0.0552	0.0021	427.0	2.0	426	13	422.3	81	-1.1
T eu pb NA [6]	8	29	0.67	2.33	20.6	67	0.526	0.031	0.06870	0.00049	0.12	0.0555	0.0032	428.3	3.0	429	20	433.6	125	1.3

**59 -- C-14-59 granite (61°42.479 / 9°15.004)**

Z tip CA [1]	24	127	0.51	0.05	3.2	14400	3.237	0.008	0.23994	0.00048	0.96	0.097836	0.000069	1386.4	2.5	1466.0	1.8	1583.3	1.3	13.8
Z lp fr CA [1]	1	994	0.49	0.00	1.0	9943	1.770	0.005	0.15616	0.00039	0.92	0.082190	0.000095	935.4	2.2	1034.4	1.9	1250.1	2.3	27.0
Z tip CA [1]	9	120	0.50	0.00	1.5	6476	1.535	0.004	0.14206	0.00029	0.86	0.07837	0.00011	856.3	1.7	944.5	1.6	1156.3	2.7	27.7
Z eu sp CA [1]	1	439	0.28	0.00	0.8	4145	1.308	0.025	0.11482	0.00206	0.96	0.08259	0.00043	700.7	11.9	849	11	1260	10	46.8
Z tip CA [1]	1	436	0.34	0.00	0.3	8455	0.963	0.004	0.10787	0.00040	0.93	0.06477	0.00010	660.4	2.3	685.0	2.2	766.8	3.4	14.6
T fr b NA [1]	57	104	0.43	2.16	125	223	0.527	0.009	0.06910	0.00024	0.30	0.05530	0.00088	430.8	1.5	429.7	5.8	424.2	35	-1.6
R rd AA [1]	95	13	0.03	0.18	19	298	0.523	0.006	0.06878	0.00027	0.41	0.05511	0.00063	428.8	1.7	426.9	4.3	416.9	25	-3.0

**3 -- VP3 1-m granitic dyke in amphibolite (61°37.473 / 9°21.214)**

Z tip CA [1]	13	555	0.24	0.00	1.3	64194	2.175	0.006	0.17878	0.00039	0.93	0.088256	0.000083	1060.3	2.1	1173.2	1.8	1388.1	1.8	25.6
Z sp CA [1]	2	292	0.29	0.00	2.0	3031	1.695	0.007	0.16533	0.00034	0.65	0.07437	0.00023	986.4	1.9	1006.8	2.6	1051.6	6.2	6.7
Z tip CA [1]	13	100	0.62	0.00	0.9	13711	1.672	0.004	0.15985	0.00032	0.92	0.075869	0.000072	956.0	1.8	998.0	1.5	1091.6	1.9	13.4

**17 -- C-13-17 felsic dyke cutting Steinhø Complex, Ottadalen (61°47.173 / 9°23.891)**

Z sb sp CA [1]	11	99	0.25	0.49	7.6	1309	1.392	0.005	0.14305	0.00033	0.73	0.07056	0.00018	861.9	1.9	885.4	2.1	944.7	5.1	9.4
Z sb tip CA [1]	10	124	0.68	0.04	2.4	4367	1.304	0.003	0.13667	0.00027	0.85	0.06919	0.00010	825.8	1.5	847.4	1.5	904.5	3.0	9.3
Z sb tip CA [1]	12	91	0.84	0.08	3.0	3109	1.306	0.004	0.13480	0.00035	0.86	0.07025	0.00011	815.2	2.0	848.3	1.8	935.8	3.3	13.7
Z sb sp CA [1]	20	58	0.78	0.00	1.8	5215	1.221	0.003	0.12764	0.00025	0.87	0.069370	0.000089	774.4	1.4	810.2	1.4	909.8	2.6	15.8
Z sb sp CA [1]	37	35	0.81	0.05	3.8	2219	0.956	0.003	0.10312	0.00021	0.80	0.06722	0.00012	632.7	1.2	681.1	1.4	844.6	3.6	26.3

**20 -- C-15-20 equigranular gabbro Ørnkampen (61°42.980, 9°05.700)**

Z sb eq CA [1]	4	258	0.54	0.00	1.2	14530	3.371	0.011	0.26136	0.00072	0.93	0.09354	0.00011	1496.8	3.7	1497.7	2.5	1498.9	2.3	0.2
Z sb sp CA [1]	7	179	0.45	0.22	3.6	5554	3.318	0.010	0.25811	0.00062	0.90	0.09324	0.00012	1480.2	3.2	1485.4	2.3	1492.8	2.4	0.9
Z sb tip CA [1]	10	198	0.44	0.00	1.2	26269	3.248	0.009	0.25445	0.00062	0.95	0.092580	0.000086	1461.4	3.2	1468.7	2.2	1479.3	1.8	1.4

<sup>1)</sup> Z = zircon; T = titanite; R = rutile; eu = euhedral; sb = subhedral; an = anhedral; eq = equant; lp = long-prismatic (l/w >4); sp = short prismatic (l/w = 2-4); fr = fragment; db = dark-brown; pb = pale-brown; b = brown; y = yellow; pk = pink; rd = red; op = opaque; [1] = number of grains in fraction; CL-X\* = imaged with cathodoluminescence and grain/domain X in Fig. 5; NA = non abraded, AA = air abraded; CA = chemically abraded; unless otherwise specified all the zircons were clear and transparent.

<sup>2,4)</sup> weight and concentrations are known to better than 10%, except for those near and below the ca. 1 µg limit of resolution of the balance.

<sup>3)</sup> Th/U model ratio inferred from 208/206 ratio and age of sample

<sup>4)</sup> Pbc = total common Pb in sample (initial +blank)

<sup>5)</sup> raw data corrected for fractionation and blank

<sup>6)</sup> corrected for fractionation, spike, blank and initial common Pb; error calculated by propagating the main sources of uncertainty.

<sup>7)</sup> D = degree of discordancy