

Complete step-degassing results: Dry Valleys bedrock and erratic samples run May-August 2010.

Sample name	Aliquot	Aliquot weight (g)	Heating temperature (deg C)	Heating time (hr)	Total ²⁰ Ne released ² (10 ⁹ atoms)	Total ²¹ Ne released ³ (10 ⁹ atoms)	²¹ Ne / ²⁰ Ne ⁴ (10 ⁻³)	²² Ne / ²⁰ Ne ⁴ (10 ⁻³)	Cosmogenic ²¹ Ne ⁵ This heating step (10 ⁶ atoms g ⁻¹)	Cosmogenic ²¹ Ne as % of ²¹ Ne released in this heating step	Percent of total cosmogenic ²¹ Ne released in this step	Total cosmogenic ²¹ Ne (10 ⁶ atoms g ⁻¹)
003-BR	a	0.1328	390	0.2	0.748 +/- 0.020	31.519 +/- 0.922	42.095 +/- 0.867	143.2 +/- 3.1	221.50 +/- 6.98	93	83	265.9 +/- 7.2
			780	0.2	1.201 +/- 0.028	8.919 +/- 0.294	7.419 +/- 0.162	107.6 +/- 1.5	40.47 +/- 1.75	60	15	
			1140	0.2	0.162 +/- 0.013	0.995 +/- 0.088	6.106 +/- 0.694	126.6 +/- 12.1	3.90 +/- 0.72	52	1	
021-BR	a	0.144	390	0.2	0.687 +/- 0.020	11.783 +/- 0.369	17.145 +/- 0.456	123.9 +/- 3.2	67.97 +/- 2.61	83	50	135.9 +/- 4.2
			780	0.2	4.843 +/- 0.107	23.444 +/- 0.727	4.835 +/- 0.084	101.9 +/- 0.8	63.33 +/- 3.18	39	47	
			1140	0.2	1.811 +/- 0.040	6.055 +/- 0.218	3.321 +/- 0.082	101.1 +/- 1.3	4.57 +/- 1.04	11	3	
023-BR	a	0.1284	390	0.2	1.107 +/- 0.027	5.863 +/- 0.229	5.290 +/- 0.170	103.2 +/- 2.1	20.17 +/- 1.55	44	54	37.0 +/- 3.6
			780	0.2	6.157 +/- 0.136	19.882 +/- 0.638	3.226 +/- 0.062	100.5 +/- 0.7	12.85 +/- 2.98	8	35	
			1140	0.2	1.258 +/- 0.030	4.260 +/- 0.2	3.367 +/- 0.135	100.8 +/- 1.8	4.01 +/- 1.33	12	11	
077-BR	a	0.1249	390	0.2	1.726 +/- 0.040	10.306 +/- 0.338	5.962 +/- 0.130	106.3 +/- 1.7	41.65 +/- 2.04	50	32	129.6 +/- 3.8
			780	0.2	2.892 +/- 0.066	18.157 +/- 0.538	6.269 +/- 0.098	105.2 +/- 1.0	76.92 +/- 2.88	53	59	
			1140	0.2	0.494 +/- 0.017	2.853 +/- 0.17	5.734 +/- 0.347	104.5 +/- 4.1	11.01 +/- 1.43	48	8	
	b	0.1237	390	0.2	1.621 +/- 0.037	9.786 +/- 0.327	6.029 +/- 0.139	105.3 +/- 1.8	40.37 +/- 2.05	51	31	130.2 +/- 4.0
			780	0.2	2.954 +/- 0.066	18.127 +/- 0.567	6.128 +/- 0.110	106.0 +/- 1.1	75.94 +/- 3.12	52	58	
			1140	0.2	0.601 +/- 0.017	3.520 +/- 0.197	5.807 +/- 0.308	109.5 +/- 3.2	13.90 +/- 1.55	49	11	
078-BR	a	0.1318	390	0.2	0.438 +/- 0.016	4.563 +/- 0.172	10.405 +/- 0.424	108.5 +/- 4.3	24.88 +/- 1.36	72	77	32.2 +/- 1.8
			780	0.2	0.310 +/- 0.015	1.766 +/- 0.133	5.685 +/- 0.466	111.7 +/- 6.4	6.46 +/- 1.06	48	20	
			1140	0.2	0.021 +/- 0.012	0.172 +/- 0.041	7.960 +/- 4.691	252.8 +/- 145.0	0.83 +/- 0.41	64	3	
080-BR	a	0.1274	390	0.2	4.233 +/- 0.092	13.810 +/- 0.438	3.260 +/- 0.061	104.0 +/- 0.9	10.03 +/- 2.06	9	12	86.3 +/- 4.4
			780	0.2	6.839 +/- 0.144	29.480 +/- 0.892	4.290 +/- 0.059	104.5 +/- 0.5	71.68 +/- 3.53	31	83	
			1140	0.2	1.107 +/- 0.025	3.873 +/- 0.206	3.482 +/- 0.171	103.4 +/- 1.7	4.56 +/- 1.49	15	5	
132-BR	a	0.1504	390	0.2	1.321 +/- 0.028	7.989 +/- 0.227	6.042 +/- 0.139	104.7 +/- 1.8	27.18 +/- 1.35	51	51	53.8 +/- 2.3
			780	0.2	2.870 +/- 0.050	12.002 +/- 0.311	4.183 +/- 0.072	102.7 +/- 1.1	23.44 +/- 1.44	29	44	
			1140	0.2	1.065 +/- 0.018	3.620 +/- 0.163	3.409 +/- 0.153	101.5 +/- 2.1	3.20 +/- 1.09	13	6	
	b	0.1527	390	0.2	1.016 +/- 0.024	7.334 +/- 0.251	7.215 +/- 0.229	109.5 +/- 2.5	28.43 +/- 1.67	59	58	49.0 +/- 2.4
			780	0.2	3.000 +/- 0.051	11.594 +/- 0.303	3.863 +/- 0.070	103.2 +/- 0.9	17.83 +/- 1.41	23	36	
			1140	0.2	0.855 +/- 0.015	2.930 +/- 0.163	3.449 +/- 0.190	100.4 +/- 2.7	2.75 +/- 1.07	14	6	
133-FLO	a	0.1353	390	0.2	0.825 +/- 0.019	18.460 +/- 0.495	22.360 +/- 0.509	126.4 +/- 2.7	118.84 +/- 3.70	87	51	231.4 +/- 5.1
			780	0.2	2.507 +/- 0.044	17.405 +/- 0.452	6.943 +/- 0.121	106.0 +/- 1.1	77.78 +/- 2.73	60	34	
			1140	0.2	0.712 +/- 0.029	6.566 +/- 0.265	9.279 +/- 0.505	109.5 +/- 4.9	34.73 +/- 2.17	72	15	
134-BR	b	0.1529	390	0.2	0.929 +/- 0.029	5.843 +/- 0.196	6.287 +/- 0.235	106.2 +/- 3.5	20.31 +/- 1.40	53	63	32.4 +/- 2.8
			780	0.2	5.022 +/- 0.082	16.511 +/- 0.473	3.285 +/- 0.070	101.6 +/- 0.9	10.76 +/- 2.33	10	33	
			1140	0.2	0.980 +/- 0.017	3.082 +/- 0.126	3.162 +/- 0.127	104.5 +/- 2.9	1.30 +/- 0.82	6	4	
	c	0.1482	390	0.2	0.968 +/- 0.026	5.945 +/- 0.271	6.138 +/- 0.253	107.5 +/- 2.6	20.83 +/- 1.75	52	51	40.9 +/- 3.0
			780	0.2	4.690 +/- 0.103	16.500 +/- 0.521	3.515 +/- 0.064	100.3 +/- 0.8	17.65 +/- 2.06	16	43	
			1140	0.2	1.291 +/- 0.030	4.202 +/- 0.215	3.237 +/- 0.144	105.2 +/- 1.6	2.43 +/- 1.26	9	6	
	d	0.134	390	0.2	0.776 +/- 0.020	5.102 +/- 0.192	6.500 +/- 0.225	105.2 +/- 2.9	20.59 +/- 1.41	54	53	38.8 +/- 2.7
			780	0.2	4.050 +/- 0.083	14.140 +/- 0.44	3.445 +/- 0.067	100.8 +/- 0.8	14.75 +/- 2.06	14	38	
			1140	0.2	1.050 +/- 0.025	3.610 +/- 0.174	3.395 +/- 0.146	105.2 +/- 2.1	3.43 +/- 1.15	13	9	

135-FLO	a	0.1353	390	0.2	0.555 +/- 0.025	11.108 +/- 0.287	20.006 +/- 0.887	128.3 +/- 6.0	70.22 +/- 2.20	86	39	178.3 +/- 3.8
			780	0.2	4.353 +/- 0.070	25.902 +/- 0.579	5.944 +/- 0.071	105.2 +/- 0.9	96.40 +/- 2.76	50	54	
			1140	0.2	1.654 +/- 0.022	6.437 +/- 0.205	3.914 +/- 0.112	104.2 +/- 1.5	11.72 +/- 1.38	25	7	
138-PAV	b	0.1304	390	0.2	0.829 +/- 0.027	69.034 +/- 1.491	83.320 +/- 2.393	198.1 +/- 6.0	512.49 +/- 11.50	97	63	809.0 +/- 13.1
			780	0.2	2.669 +/- 0.043	45.406 +/- 0.993	16.994 +/- 0.199	116.7 +/- 1.1	288.34 +/- 6.21	83	36	
			1140	0.2	0.452 +/- 0.010	2.393 +/- 0.135	5.323 +/- 0.307	110.1 +/- 3.6	8.12 +/- 1.07	44	1	
	c	0.1363	390	0.2	1.034 +/- 0.025	72.114 +/- 1.994	69.626 +/- 1.091	182.1 +/- 3.0	508.51 +/- 14.69	96	64	789.3 +/- 16.4
			780	0.2	2.844 +/- 0.063	45.812 +/- 1.282	16.087 +/- 0.177	115.2 +/- 0.9	274.93 +/- 7.12	82	35	
			1140	0.2	0.395 +/- 0.015	1.962 +/- 0.116	4.936 +/- 0.309	110.5 +/- 4.7	5.85 +/- 0.92	41	1	
139-PAV	a	0.1385	390	0.2	0.809 +/- 0.021	79.605 +/- 1.728	98.447 +/- 2.020	219.1 +/- 4.7	559.56 +/- 12.54	97	64	870.6 +/- 14.2
			780	0.2	2.331 +/- 0.040	48.443 +/- 1.001	20.761 +/- 0.231	122.0 +/- 1.6	300.71 +/- 6.51	86	35	
			1140	0.2	0.414 +/- 0.014	2.649 +/- 0.12	6.437 +/- 0.337	110.2 +/- 5.0	10.32 +/- 0.92	54	1	
144-BR	a	0.1405	390	0.2	0.335 +/- 0.014	12.630 +/- 0.395	37.636 +/- 1.466	152.3 +/- 6.5	83.14 +/- 2.84	92	48	173.4 +/- 4.1
			780	0.2	2.738 +/- 0.058	20.097 +/- 0.621	7.303 +/- 0.111	103.7 +/- 0.9	84.96 +/- 2.82	59	49	
			1140	0.2	0.874 +/- 0.021	3.347 +/- 0.154	3.812 +/- 0.161	102.8 +/- 2.9	5.32 +/- 1.02	22	3	

Notes:

² Computed by comparison to ²⁰Ne signal in air pipettes. 1-sigma uncertainty includes measurement uncertainty of ²⁰Ne signal in this analysis and the reproducibility of the air pipette signal

³ Computed by comparison to ²¹Ne signal in air pipettes. 1-sigma uncertainty includes measurement uncertainty of ²¹Ne signal in this analysis and the reproducibility of the air pipette signal

⁴ Isotope ratio measured internally during each analysis: does not involve normalization to the Ne isotope signals in the air pipettes.

⁵ Analyses where cosmogenic ²¹Ne was not distinguishable from zero at 1 sigma are not shown. Cosmogenic ²¹Ne concentrations were calculated by normalization to either the ²⁰Ne or ²¹Ne signal in the air pipettes, depending on which method yielded better precision.