Table S1g: Step-degassing Ne analyses of Pit 12 samples.

Sample name	Aliquot	Aliquot weight (g)	Heating temperature (deg C)	Heating time (hr)	Total ^{20}Ne released[1] (10^9 atoms)	Total ^{21}Ne released[2] (10^6 atoms)	Total ^{22}Ne released[3] (10^6 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})
OV12-0-3	a	0.1438	400	0.25	1.471 +/- 0.039	4.658 +/- 0.181	146.709 +/- 4.093	3.198 +/- 0.124	100.9 +/- 3.1	2.45 +/- 1.27	8	33	7.3 +/- 1.8
			850	0.25	0.988 +/- 0.033	3.394 +/- 0.132	97.997 +/- 3.650	3.489 +/- 0.154	100.1 +/- 4.5	3.65 +/- 1.07	15	50	
			1100	0.25	0.075 +/- 0.021	0.397 +/- 0.07	7.143 +/- 2.513	5.420 +/- 1.764	96.7 +/- 43.1	1.23 +/- 0.65	45	17	
OV12-0-3	b	0.3134	400	0.25	4.355 +/- 0.071	14.136 +/- 0.315	432.767 +/- 6.367	3.281 +/- 0.053	100.2 +/- 1.3	4.49 +/- 0.74	10	48	9.3 +/- 1.1
			850	0.25	1.726 +/- 0.041	6.297 +/- 0.191	171.258 +/- 3.791	3.693 +/- 0.114	100.0 +/- 2.7	4.06 +/- 0.64	20	44	
			1100	0.25	0.237 +/- 0.030	0.924 +/- 0.085	21.817 +/- 3.006	3.923 +/- 0.604	92.7 +/- 17.2	0.71 +/- 0.39	24	8	
OV12-17-21	a	0.1428	400	0.25	0.330 +/- 0.031	1.265 +/- 0.101	34.763 +/- 3.302	3.873 +/- 0.467	106.5 +/- 14.0	2.03 +/- 0.96	23	39	5.2 +/- 1.3
			850	0.25	0.353 +/- 0.025	1.493 +/- 0.091	33.930 +/- 2.940	4.302 +/- 0.388	97.1 +/- 10.7	3.16 +/- 0.83	30	61	
			1100	0.25	0.058 +/- 0.026	0.128 +/- 0.056	3.581 +/- 2.460	2.249 +/- 1.411	62.3 +/- 51.1	0.00 +/- 0.00	0	0	
OV12-17-21	b	0.3129	400	0.25	0.890 +/- 0.038	3.278 +/- 0.133	87.811 +/- 3.180	3.720 +/- 0.202	99.4 +/- 5.3	2.07 +/- 0.56	20	43	4.8 +/- 0.7
			850	0.25	0.813 +/- 0.028	3.245 +/- 0.122	81.413 +/- 2.938	4.040 +/- 0.183	100.9 +/- 4.7	2.70 +/- 0.47	26	57	
			1100	0.25	0.167 +/- 0.018	0.535 +/- 0.08	13.900 +/- 2.529	3.231 +/- 0.590	84.0 +/- 17.7	0.00 +/- 0.00	0	0	
OV12-32-36	a	0.1415	400	0.25	0.620 +/- 0.034	2.018 +/- 0.116	60.470 +/- 3.401	3.290 +/- 0.244	98.7 +/- 7.4	1.46 +/- 1.08	10	25	5.9 +/- 1.6
			850	0.25	1.087 +/- 0.031	3.776 +/- 0.152	111.521 +/- 3.328	3.532 +/- 0.148	103.6 +/- 3.6	4.42 +/- 1.15	17	75	
			1100	0.25	0.140 +/- 0.024	0.421 +/- 0.067	11.980 +/- 2.504	3.068 +/- 0.712	86.4 +/- 23.3	0.00 +/- 0.00	0	0	
OV12-32.36	b	0.3174	400	0.25	1.381 +/- 0.036	5.002 +/- 0.182	134.484 +/- 3.638	3.657 +/- 0.141	98.1 +/- 3.2	3.05 +/- 0.62	19	35	8.7 +/- 1.0
			850	0.25	2.415 +/- 0.043	8.507 +/- 0.244	243.191 +/- 4.211	3.561 +/- 0.087	101.4 +/- 1.7	4.60 +/- 0.67	17	53	
			1100	0.25	0.359 +/- 0.024	1.385 +/- 0.104	35.048 +/- 2.593	3.881 +/- 0.381	98.4 +/- 9.6	1.05 +/- 0.44	24	12	
OV12-45-48	a	0.1475	400	0.25	0.697 +/- 0.031	2.485 +/- 0.108	70.558 +/- 3.374	3.605 +/- 0.203	102.4 +/- 6.3	2.88 +/- 0.96	17	53	5.4 +/- 1.4
			850	0.25	0.720 +/- 0.033	2.505 +/- 0.126	72.163 +/- 3.183	3.548 +/- 0.223	101.2 +/- 6.0	2.55 +/- 1.08	15	47	
			1100	0.25	0.018 +/- 0.020	0.076 +/- 0.059	0.923 +/- 2.288	4.273 +/- 5.755	51.3 +/- 139.0	0.00 +/- 0.00	0	0	
OV12-45-48	b	0.3309	400	0.25	1.526 +/- 0.105	5.793 +/- 0.164	172.274 +/- 4.626	3.831 +/- 0.271	113.7 +/- 8.1	3.87 +/- 1.06	22	50	7.8 +/- 1.2
			850	0.25	1.589 +/- 0.032	5.475 +/- 0.173	160.329 +/- 3.590	3.482 +/- 0.103	101.6 +/- 2.4	2.52 +/- 0.50	15	32	
			1100	0.25	0.188 +/- 0.021	1.008 +/- 0.096	17.475 +/- 2.481	5.381 +/- 0.781	93.5 +/- 16.8	1.37 +/- 0.35	45	18	
OV12-48-54I	a	0.143	400	0.25	1.562 +/- 0.039	5.416 +/- 0.197	154.977 +/- 4.545	3.506 +/- 0.123	100.3 +/- 3.1	5.99 +/- 1.35	16	60	9.9 +/- 2.0
			850	0.25	2.287 +/- 0.038	7.183 +/- 0.238	234.988 +/- 4.810	3.204 +/- 0.092	103.9 +/- 1.8	3.93 +/- 1.47	8	40	
			1100	0.25	0.377 +/- 0.026	1.155 +/- 0.094	37.928 +/- 2.244	3.124 +/- 0.324	101.6 +/- 9.0	0.00 +/- 0.00	0	0	
OV12-48-54I	b	0.3158	400	0.25	3.637 +/- 0.061	11.538 +/- 0.324	358.637 +/- 5.899	3.213 +/- 0.074	99.4 +/- 1.5	2.93 +/- 0.86	8	29	10.0 +/- 1.4
			850	0.25	5.905 +/- 0.097	19.255 +/- 0.474	603.924 +/- 9.103	3.289 +/- 0.053	103.0 +/- 1.1	6.19 +/- 1.00	10	62	
			1100	0.25	1.070 +/- 0.024	3.435 +/- 0.167	109.245 +/- 2.812	3.224 +/- 0.161	102.8 +/- 3.2	0.90 +/- 0.55	8	9	

[1] Computed by comparison to ^{20}Ne signal in air pipettes. 1-sigma uncertainty includes measurement uncertainty of ^{20}Ne signal in this analysis and the reproducibility of the air pipette signal
[2] Computed by comparison to ^{21}Ne signal in air pipettes. 1-sigma uncertainty includes measurement uncertainty of ^{21}Ne signal in this analysis and the reproducibility of the air pipette signal
[3] Computed by comparison to ^{22}Ne signal in air pipettes. 1-sigma uncertainty includes measurement uncertainty of ^{21}Ne 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] Computed by comparison of ^{20}Ne or ^{21}Ne signal to air pipettes, whichever is more precise. Assumes that Ne in sample is a binary mixture of atmospheric and cosmogenic Ne.