

CRONUS-A quartz standard. Complete step-degassing results. May-August 2010 measurement cycle.

| Sample name | Aliquot | Aliquot weight (g) | Heating temperature (deg C) | Heating time (hr) | Total <sup>22</sup> Ne released <sup>2</sup> (10 <sup>6</sup> atoms) | Total <sup>21</sup> Ne released <sup>3</sup> (10 <sup>6</sup> atoms) | <sup>21</sup> Ne / <sup>22</sup> Ne <sup>4</sup> (10 <sup>-3</sup> ) | <sup>22</sup> Ne / <sup>20</sup> Ne <sup>4</sup> (10 <sup>-3</sup> ) | Cosmoogenic <sup>21</sup> Ne <sup>5</sup> This heating step (10 <sup>6</sup> atoms q <sup>-1</sup> ) | Cosmoogenic <sup>21</sup> Ne as % of <sup>21</sup> Ne released in this heating step | Percent of total cosmoogenic <sup>21</sup> Ne released in this step | Total cosmoogenic <sup>21</sup> Ne (10 <sup>6</sup> atoms q <sup>-1</sup> ) |
|-------------|---------|--------------------|-----------------------------|-------------------|----------------------------------------------------------------------|----------------------------------------------------------------------|----------------------------------------------------------------------|----------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------|-----------------------------------------------------------------------------|
| A-STD-1     | c       | 0.135              | 390                         | 0.2               | 1.0744 +/- 0.0228                                                    | 19.765 +/- 0.485                                                     | 18.376 +/- 0.34                                                      | 118.4 +/- 2.2                                                        | 123.31 +/- 3.64                                                                                      | 84                                                                                  | 37                                                                  | 335.3 +/- 7.1                                                               |
|             |         |                    | 780                         | 0.2               | 1.45 +/- 0.0286                                                      | 31.131 +/- 0.789                                                     | 21.472 +/- 0.407                                                     | 123.2 +/- 2                                                          | 199.58 +/- 5.89                                                                                      | 87                                                                                  | 60                                                                  |                                                                             |
|             |         |                    | 1140                        | 0.2               | 0.2339 +/- 0.0536                                                    | 2.359 +/- 0.091                                                      | 10.112 +/- 2.342                                                     | 109.6 +/- 25.6                                                       | 12.39 +/- 1.36                                                                                       | 71                                                                                  | 4                                                                   |                                                                             |
| A-STD-1     | d       | 0.1373             | 390                         | 0.2               | 1.4189 +/- 0.0367                                                    | 26.168 +/- 0.653                                                     | 18.422 +/- 0.445                                                     | 120.4 +/- 2.9                                                        | 160.6 +/- 4.84                                                                                       | 84                                                                                  | 48                                                                  | 336.2 +/- 6.7                                                               |
|             |         |                    | 780                         | 0.2               | 1.4146 +/- 0.0288                                                    | 27.149 +/- 0.612                                                     | 19.194 +/- 0.304                                                     | 121.7 +/- 2.1                                                        | 167.87 +/- 4.52                                                                                      | 85                                                                                  | 50                                                                  |                                                                             |
|             |         |                    | 1140                        | 0.2               | 0.1679 +/- 0.0114                                                    | 1.551 +/- 0.093                                                      | 9.262 +/- 0.822                                                      | 130.6 +/- 11.3                                                       | 7.71 +/- 0.72                                                                                        | 68                                                                                  | 2                                                                   |                                                                             |
| A-STD-1     | e       | 0.1053             | 390                         | 0.2               | 0.5434 +/- 0.0199                                                    | 17.499 +/- 0.499                                                     | 31.854 +/- 1.126                                                     | 135.7 +/- 5                                                          | 151.48 +/- 4.79                                                                                      | 91                                                                                  | 46                                                                  | 332.6 +/- 7.1                                                               |
|             |         |                    | 780                         | 0.2               | 1.1201 +/- 0.0244                                                    | 21.926 +/- 0.629                                                     | 19.319 +/- 0.332                                                     | 120.2 +/- 1.7                                                        | 174.67 +/- 5.21                                                                                      | 84                                                                                  | 53                                                                  |                                                                             |
|             |         |                    | 1140                        | 0.2               | 0.1334 +/- 0.013                                                     | 1.073 +/- 0.075                                                      | 7.94 +/- 0.916                                                       | 101.5 +/- 12.9                                                       | 6.47 +/- 0.8                                                                                         | 63                                                                                  | 2                                                                   |                                                                             |
| A-STD-1     | f       | 0.0938             | 390                         | 0.2               | 0.3063 +/- 0.0141                                                    | 12.635 +/- 0.35                                                      | 41.063 +/- 1.952                                                     | 154.5 +/- 8.1                                                        | 125.51 +/- 3.77                                                                                      | 93                                                                                  | 37                                                                  | 339.0 +/- 6.9                                                               |
|             |         |                    | 780                         | 0.2               | 1.0348 +/- 0.0217                                                    | 22.213 +/- 0.525                                                     | 21.466 +/- 0.431                                                     | 126 +/- 2.9                                                          | 204.93 +/- 5.66                                                                                      | 87                                                                                  | 60                                                                  |                                                                             |
|             |         |                    | 1140                        | 0.2               | 0.1355 +/- 0.017                                                     | 1.203 +/- 0.092                                                      | 8.883 +/- 1.29                                                       | 100.2 +/- 15.3                                                       | 8.59 +/- 1.12                                                                                        | 67                                                                                  | 3                                                                   |                                                                             |
| A-STD-1     | g       | 0.1278             | 390                         | 0.2               | 1.153 +/- 0.021                                                      | 21.948 +/- 0.433                                                     | 18.933 +/- 0.409                                                     | 118.2 +/- 2.8                                                        | 145.58 +/- 3.43                                                                                      | 85                                                                                  | 43                                                                  | 340.8 +/- 5.2                                                               |
|             |         |                    | 780                         | 0.2               | 1.264 +/- 0.013                                                      | 27.051 +/- 0.515                                                     | 21.241 +/- 0.332                                                     | 123.9 +/- 1.8                                                        | 181.48 +/- 3.79                                                                                      | 86                                                                                  | 53                                                                  |                                                                             |
|             |         |                    | 1140                        | 0.2               | 0.1984 +/- 0.0097                                                    | 2.333 +/- 0.105                                                      | 11.629 +/- 0.753                                                     | 118 +/- 11                                                           | 13.71 +/- 0.85                                                                                       | 75                                                                                  | 4                                                                   |                                                                             |
| A-STD-1     | h       | 0.0959             | 390                         | 0.2               | 0.2123 +/- 0.011                                                     | 15.762 +/- 0.403                                                     | 74.257 +/- 4.018                                                     | 181.6 +/- 12                                                         | 158.39 +/- 4.23                                                                                      | 96                                                                                  | 47                                                                  | 338.0 +/- 6.5                                                               |
|             |         |                    | 780                         | 0.2               | 1.0244 +/- 0.0133                                                    | 19.369 +/- 0.502                                                     | 18.918 +/- 0.404                                                     | 118 +/- 2.6                                                          | 171.1 +/- 4.86                                                                                       | 85                                                                                  | 51                                                                  |                                                                             |
|             |         |                    | 1140                        | 0.2               | 0.102 +/- 0.0103                                                     | 1.114 +/- 0.073                                                      | 10.907 +/- 1.295                                                     | 124.6 +/- 19.5                                                       | 8.5 +/- 0.83                                                                                         | 73                                                                                  | 3                                                                   |                                                                             |
| A-STD-1     | i       | 0.0534             | 390                         | 0.17              | 0.1035 +/- 0.013                                                     | 7.835 +/- 0.23                                                       | 75.255 +/- 9.638                                                     | 185 +/- 29.6                                                         | 141.52 +/- 4.38                                                                                      | 96                                                                                  | 40                                                                  | 353.8 +/- 7.4                                                               |
|             |         |                    | 740                         | 0.17              | 0.5588 +/- 0.0147                                                    | 12.522 +/- 0.299                                                     | 22.247 +/- 0.733                                                     | 121.3 +/- 4.6                                                        | 204.28 +/- 5.68                                                                                      | 87                                                                                  | 58                                                                  |                                                                             |
|             |         |                    | 1140                        | 0.17              | 0.0923 +/- 0.0104                                                    | 0.697 +/- 0.08                                                       | 7.475 +/- 1.196                                                      | 98.5 +/- 19.2                                                        | 7.97 +/- 1.61                                                                                        | 61                                                                                  | 2                                                                   |                                                                             |
| A-STD-1     | j       | 0.04               | 390                         | 0.2               | 0.4052 +/- 0.0128                                                    | 7.67 +/- 0.254                                                       | 18.829 +/- 0.791                                                     | 118.5 +/- 6                                                          | 162.37 +/- 6.44                                                                                      | 85                                                                                  | 49                                                                  | 330.1 +/- 9.6                                                               |
|             |         |                    | 780                         | 0.2               | 0.4371 +/- 0.0126                                                    | 7.675 +/- 0.267                                                      | 17.466 +/- 0.721                                                     | 114.8 +/- 5.1                                                        | 160.14 +/- 6.76                                                                                      | 83                                                                                  | 49                                                                  |                                                                             |
|             |         |                    | 1140                        | 0.2               | 0.097 +/- 0.0117                                                     | 0.589 +/- 0.077                                                      | 6.051 +/- 1.07                                                       | 118.9 +/- 22.2                                                       | 7.58 +/- 2.12                                                                                        | 51                                                                                  | 2                                                                   |                                                                             |
| A-STD-1     | k       | 0.1539             | 390                         | 0.2               | 0.3648 +/- 0.0125                                                    | 28.929 +/- 0.61                                                      | 78.81 +/- 2.838                                                      | 189.1 +/- 8.8                                                        | 181.63 +/- 3.98                                                                                      | 97                                                                                  | 53                                                                  | 339.7 +/- 5.7                                                               |
|             |         |                    | 780                         | 0.2               | 1.4809 +/- 0.0187                                                    | 28.002 +/- 0.668                                                     | 18.852 +/- 0.371                                                     | 117.6 +/- 2.3                                                        | 153.5 +/- 4.07                                                                                       | 84                                                                                  | 45                                                                  |                                                                             |
|             |         |                    | 1140                        | 0.2               | 0.1234 +/- 0.0115                                                    | 1.066 +/- 0.075                                                      | 8.595 +/- 0.988                                                      | 99.6 +/- 15.4                                                        | 4.57 +/- 0.54                                                                                        | 66                                                                                  | 1                                                                   |                                                                             |
| A-STD-1     | l       | 0.1598             | 390                         | 0.2               | 0.4426 +/- 0.0145                                                    | 31.565 +/- 0.746                                                     | 71.14 +/- 2.298                                                      | 169.7 +/- 6.8                                                        | 190.03 +/- 4.69                                                                                      | 96                                                                                  | 56                                                                  | 339.1 +/- 6.3                                                               |
|             |         |                    | 780                         | 0.2               | 1.5241 +/- 0.0462                                                    | 27.363 +/- 0.661                                                     | 17.985 +/- 0.553                                                     | 119.1 +/- 3.7                                                        | 143.54 +/- 4.24                                                                                      | 84                                                                                  | 42                                                                  |                                                                             |
|             |         |                    | 1170                        | 0.2               | 0.1378 +/- 0.0116                                                    | 1.286 +/- 0.072                                                      | 9.357 +/- 0.924                                                      | 111.7 +/- 14.9                                                       | 5.52 +/- 0.5                                                                                         | 69                                                                                  | 2                                                                   |                                                                             |
| A-STD-1     | m       | 0.1553             | 390                         | 0.2               | 0.6625 +/- 0.0255                                                    | 23.232 +/- 0.513                                                     | 35.036 +/- 1.363                                                     | 138.1 +/- 5.9                                                        | 137.48 +/- 3.35                                                                                      | 92                                                                                  | 41                                                                  | 338.3 +/- 4.8                                                               |
|             |         |                    | 780                         | 0.2               | 1.7829 +/- 0.0227                                                    | 34.07 +/- 0.641                                                      | 19.103 +/- 0.204                                                     | 119 +/- 1.4                                                          | 186.03 +/- 3.34                                                                                      | 85                                                                                  | 55                                                                  |                                                                             |
|             |         |                    | 1170                        | 0.2               | 0.227 +/- 0.0113                                                     | 2.955 +/- 0.144                                                      | 13.024 +/- 0.872                                                     | 124.6 +/- 9.9                                                        | 14.76 +/- 0.95                                                                                       | 78                                                                                  | 4                                                                   |                                                                             |
| A-STD-1     | n       | 0.0829             | 390                         | 0.2               | 0.4108 +/- 0.0125                                                    | 14.934 +/- 0.391                                                     | 36.511 +/- 1.341                                                     | 141.8 +/- 5.8                                                        | 166.09 +/- 4.76                                                                                      | 92                                                                                  | 50                                                                  | 335.0 +/- 6.5                                                               |
|             |         |                    | 780                         | 0.2               | 0.9214 +/- 0.0104                                                    | 16.04 +/- 0.374                                                      | 17.415 +/- 0.348                                                     | 117.8 +/- 2.3                                                        | 161.27 +/- 4.29                                                                                      | 83                                                                                  | 48                                                                  |                                                                             |
|             |         |                    | 1170                        | 0.2               | 0.0977 +/- 0.013                                                     | 0.922 +/- 0.083                                                      | 9.369 +/- 1.492                                                      | 128.2 +/- 22                                                         | 7.66 +/- 1.1                                                                                         | 69                                                                                  | 2                                                                   |                                                                             |
| A-STD-1     | o       | 0.1423             | 390                         | 0.2               | 0.3667 +/- 0.0223                                                    | 20.077 +/- 0.573                                                     | 54.943 +/- 3.183                                                     | 169 +/- 10.2                                                         | 133.96 +/- 4.07                                                                                      | 95                                                                                  | 39                                                                  | 340.4 +/- 7.4                                                               |
|             |         |                    | 780                         | 0.2               | 1.6861 +/- 0.0425                                                    | 32.813 +/- 0.902                                                     | 19.513 +/- 0.296                                                     | 120.3 +/- 2.1                                                        | 196.87 +/- 6.09                                                                                      | 85                                                                                  | 58                                                                  |                                                                             |
|             |         |                    | 1170                        | 0.2               | 0.1922 +/- 0.0117                                                    | 1.929 +/- 0.104                                                      | 10.08 +/- 0.745                                                      | 105.3 +/- 10.5                                                       | 9.59 +/- 0.77                                                                                        | 71                                                                                  | 3                                                                   |                                                                             |