Table S1 Crustal thicknesses in the compilation of AN-Moho

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Name | Longitude  (°) | Latitude  (°) | Crustal thickness  (km) | Moho depths  (km) | Sources |
| 9169 | -6.02 | -75 | 45.0 | 42.3 | [1](#_ENREF_1) |
| 9172 | -9.7 | -73.6 | 44.0 | 42.6 | [1](#_ENREF_1) |
| 96100B | 5.9 | -67.7 | 12.0 | 16.0 | [2](#_ENREF_2) |
| 96100E | 6.1 | -69.7 | 23.0 | 25.0 | [2](#_ENREF_2) |
| 96110B | -14.1 | -69 | 10.0 | 14.0 | [2](#_ENREF_2) |
| 96110E | -12.5 | -73.5 | 21.0 | 23.0 | [2](#_ENREF_2) |
| A | 67 | -72 | 32.0 | 32.0 | [3](#_ENREF_3),[4](#_ENREF_4) |
| AMERY | 73.85 | -69.71 | 30.0 | 30.0 | [3](#_ENREF_3),[4](#_ENREF_4) |
| AN01 | 166.92 | -77.19 | 20.0 | 19.8 | [5](#_ENREF_5) |
| AN05 | 163.96 | -77.69 | 18.0 | 17.8 | [5](#_ENREF_5) |
| AN08 | 160.15 | -77.54 | 40.0 | 37.9 | [5](#_ENREF_5) |
| AN09 | 162.17 | -77.93 | 34.0 | 32.8 | [5](#_ENREF_5) |
| AN10 | 162.83 | -77.63 | 32.0 | 31.3 | [5](#_ENREF_5) |
| AWI2-4 | -13.09 | -74.5 | 45.9 | 45.0 | [6](#_ENREF_6) |
| B | 78.2 | -68.77 | 34.0 | 34.0 | [3](#_ENREF_3),[4](#_ENREF_4) |
| BEAVER | 68.34 | -70.75 | 30.0 | 30.0 | [3](#_ENREF_3),[4](#_ENREF_4) |
| BT01 | 166.563 | -71.112 | 25.0 | 23.3 | [7](#_ENREF_7) |
| BT05 | 158.928 | -69.89 | 31.0 | 29.5 | [7](#_ENREF_7) |
| BT06 | 157.337 | -69.514 | 32.0 | 31.4 | [7](#_ENREF_7) |
| BT07 | 155.03 | -69.245 | 31.0 | 30.0 | [7](#_ENREF_7) |
| BVLK | 68.17 | -70.8 | 33.0 | 32.9 | [8](#_ENREF_8) |
| BYRD | -119.473 | -80.0168 | 26.75 | 25.2 | [9](#_ENREF_9) |
| BYRD | -119.5466 | -80 | 27.0 | 25.5 | [10](#_ENREF_10) |
| C | 69.09 | -71.55 | 24.0 | 24.0 | [3](#_ENREF_3),[4](#_ENREF_4) |
| CASE | 160.1262 | -80.4481 | 27.8 | 27.0 | [11](#_ENREF_11) |
| CASEY | 110.31 | -66.17 | 30.0 | 30.0 | [12](#_ENREF_12) |
| CBOB | 163.1707 | -77.0342 | 20.1 | 20.0 | [11](#_ENREF_11) |
| CBRI | 166.4266 | -77.2516 | 18.3 | 18.0 | [11](#_ENREF_11) |
| CCRZ | 169.0947 | -77.5166 | 19.8 | 19.0 | [11](#_ENREF_11) |
| CHNA | 77.013 | -78.677 | 46.8 | 43.3 | [13](#_ENREF_13) |
| CHNB | 76.976 | -77.1744 | 57.5 | 54.5 | [13](#_ENREF_13) |
| CLRK | -141.8485 | -77.3231 | 30 | 29.0 | [9](#_ENREF_9) |
| CPHI | 162.6484 | -75.0745 | 22.2 | 22.0 | [11](#_ENREF_11) |
| CRES | 64.17 | -72.66 | 33.0 | 31.6 | [8](#_ENREF_8) |
| CTEA | 160.7643 | -78.9439 | 21.3 | 20.0 | [11](#_ENREF_11) |
| D000 | 298.5 | -74.86 | 37.0 | 37.0 | [14](#_ENREF_14) |
| D100 | 301 | -75.45 | 35.0 | 35.0 | [14](#_ENREF_14) |
| D200 | 304 | -76.06 | 33.0 | 33.0 | [14](#_ENREF_14) |
| D320 | -52.5 | -76.8 | 32.0 | 32.0 | [14](#_ENREF_14) |
| D420 | -49 | -77.2 | 30.0 | 30.0 | [14](#_ENREF_14) |
| D500 | -47 | -77.7 | 29.0 | 29.0 | [14](#_ENREF_14) |
| D640 | -41 | -77.8 | 32.0 | 32.0 | [14](#_ENREF_14) |
| D | 72.38 | -69.49 | 24.0 | 24.0 | [3](#_ENREF_3),[4](#_ENREF_4) |
| D780 | -36 | -77.8 | 41.0 | 41.0 | [14](#_ENREF_14) |
| DAVI | 78 | -68.7 | 39.0 | 38.9 | [8](#_ENREF_8) |
| DEVL | 161.9745 | -81.4757 | 18 | 17.9 | [9](#_ENREF_9) |
| DIHI | 159.48 | -79.8491 | 21.4 | 21.0 | [11](#_ENREF_11) |
| DNTW | -107.7804 | -76.4571 | 25.21 | 24.2 | [9](#_ENREF_9) |
| DOMEA | 77.1047 | -80.422 | 61.6 | 57.5 | [13](#_ENREF_13) |
| DRV | 140 | -66.8 | 28.0 | 27.6 | [15](#_ENREF_15) |
| DSS2 | -59.5 | -62.5 | 33.0 | 32.9 | [16](#_ENREF_16) |
| DSS6 | -62.5 | -64.7 | 35.0 | 34.4 | [16](#_ENREF_16) |
| DT154 | 77.0257 | -74.5824 | 49.3 | 46.6 | [13](#_ENREF_13) |
| DUFK | -53.2007 | -82.8619 | 38.4 | 37.4 | [9](#_ENREF_9) |
| E000 | 163.6175 | -77.6262 | 20.3 | 20.0 | [11](#_ENREF_11) |
| E002 | 163.0078 | -77.575 | 24.7 | 24.0 | [11](#_ENREF_11) |
| E004 | 162.0661 | -77.4133 | 30.7 | 30.0 | [11](#_ENREF_11) |
| E006 | 161.6256 | -77.3703 | 34.6 | 34.0 | [11](#_ENREF_11) |
| E008 | 160.5033 | -77.2817 | 37.8 | 36.0 | [11](#_ENREF_11) |
| E010 | 160.086 | -77.1847 | 39.0 | 37.2 | [17](#_ENREF_17),[18](#_ENREF_18) |
| E012 | 159.326 | -77.0461 | 40.6 | 38.7 | [18](#_ENREF_18) |
| E018 | 157.224 | -76.8234 | 40.7 | 38.6 | [18](#_ENREF_18) |
| E020 | 156.547 | -76.7295 | 45.2 | 43.0 | [18](#_ENREF_18) |
| E024 | 155.238 | -76.5394 | 45.6 | 43.4 | [18](#_ENREF_18) |
| E028 | 154.039 | -76.3075 | 45.6 | 43.3 | [18](#_ENREF_18) |
| E030 | 153.379 | -76.2511 | 45.5 | 43.2 | [18](#_ENREF_18) |
| EAGLE | 77.0448 | -76.4154 | 58.4 | 55.6 | [13](#_ENREF_13) |
| ERS11 | -174.445 | -77.12 | 17.5 | 18.0 | [19](#_ENREF_19) |
| ERS13 | -173.637 | -77.1217 | 17.5 | 18.0 | [19](#_ENREF_19) |
| ERS17 | -172.027 | -77.1217 | 18.5 | 19.0 | [19](#_ENREF_19) |
| ERS20 | -170.813 | -77.1217 | 19.5 | 20.0 | [19](#_ENREF_19) |
| ERS23 | -169.61 | -77.1217 | 21.5 | 22.0 | [19](#_ENREF_19) |
| ERS3 | -178.583 | -77.12 | 23.4 | 24.0 | [19](#_ENREF_19) |
| ERS5 | -176.99 | -77.1167 | 23.4 | 24.0 | [19](#_ENREF_19) |
| ESPZ | 301.6 | -63.7 | 37.0 | 36.4 | [20](#_ENREF_20) |
| FALL | -143.6284 | -85.3066 | 24 | 23.7 | [9](#_ENREF_9) |
| FISH | 162.5652 | -78.9276 | 17 | 16.7 | [9](#_ENREF_9) |
| FISHER | 67.39 | -71.52 | 39.0 | 38.4 | [8](#_ENREF_8) |
| GM01 | 104.7291 | -83.9858 | 34.5 | 31.2 | [21](#_ENREF_21) |
| GM02 | 97.5815 | -79.4251 | 42.3 | 38.6 | [21](#_ENREF_21) |
| GM03 | 85.9439 | -80.2169 | 56.0 | 52.1 | [21](#_ENREF_21) |
| GM04 | 61.1124 | -82.9997 | 51.5 | 47.7 | [21](#_ENREF_21) |
| GM05 | 51.1588 | -81.1841 | 50.2 | 46.4 | [21](#_ENREF_21) |
| GROV | 75 | -72.9 | 40.0 | 38.0 | [8](#_ENREF_8) |
| HOWD | -86.7694 | -77.5285 | 37 | 35.5 | [9](#_ENREF_9) |
| ISDE | -134.9935 | -80 | 28.0 | 27.4 | [10](#_ENREF_10) |
| J01-SP1 | 41.2 | -70.2 | 41.0 | 40.0 | [22](#_ENREF_22) |
| J01-SP2 | 41.5 | -69.8 | 41.0 | 40.0 | [22](#_ENREF_22) |
| J01-SP5 | 42.4 | -69.25 | 41.0 | 40.0 | [22](#_ENREF_22) |
| J01-SP6 | 42.7 | -69.08 | 41.0 | 40.0 | [22](#_ENREF_22) |
| J01-SP7 | 42.95 | -68.7 | 41.0 | 40.0 | [22](#_ENREF_22) |
| J99-S1 | 40.06 | -69.04 | 38.0 | 37.0 | [23](#_ENREF_23) |
| J99-S2 | 40.65 | -69.06 | 40.0 | 39.0 | [23](#_ENREF_23) |
| J99-S3 | 41.3 | -69.3 | 41.0 | 40.0 | [23](#_ENREF_23) |
| J99-S4 | 42 | -69.6 | 42.0 | 41.0 | [23](#_ENREF_23) |
| J99-S5 | 42.6 | -69.8 | 43.5 | 42.0 | [23](#_ENREF_23) |
| J99-S6 | 43.4 | -70.2 | 45.0 | 43.0 | [23](#_ENREF_23) |
| JNCT | 157.901 | -76.9313 | 38.0 | 35.8 | [18](#_ENREF_18) |
| LONW | 152.735 | -81.3466 | 45 | 43.5 | [9](#_ENREF_9) |
| LT892 | 77.767 | -71.6708 | 45.7 | 43.5 | [13](#_ENREF_13) |
| M450 | 165.4 | -77.75 | 21.0 | 21.0 | [24](#_ENREF_24) |
| MAGL | 162.4083 | -76.1381 | 23.0 | 23.0 | [11](#_ENREF_11) |
| MBL | -130.2241 | -78.093 | 25.0 | 23.4 | [10](#_ENREF_10) |
| MECK | -72.1849 | -75.2807 | 26.5 | 25.4 | [9](#_ENREF_9) |
| MILR | 156.2517 | -83.3063 | 45 | 43.1 | [9](#_ENREF_9) |
| MINN | 166.88 | -78.5504 | 20.5 | 20.0 | [11](#_ENREF_11) |
| MPAT | -155.022 | -78.0297 | 27.5 | 27.0 | [9](#_ENREF_9) |
| MTM | -100.0123 | -79.496 | 21.0 | 19.0 | [10](#_ENREF_10) |
| MUC6-8 | -11.065 | -75.25 | 53.1 | 51.0 | [6](#_ENREF_6) |
| MZH | 44.3 | -70.1 | 44.0 | 42.0 | [23](#_ENREF_23),[25](#_ENREF_25) |
| N000 | 160.378 | -76.0088 | 32.8 | 31.1 | [18](#_ENREF_18) |
| N020 | 155.818 | -77.4678 | 40.5 | 38.2 | [18](#_ENREF_18) |
| N036 | 151.278 | -78.5508 | 44.0 | 41.7 | [18](#_ENREF_18) |
| N044 | 148.616 | -79.0692 | 47.0 | 44.7 | [18](#_ENREF_18) |
| N060 | 142.595 | -80.0001 | 47.9 | 45.5 | [18](#_ENREF_18) |
| N076 | 135.434 | -80.8062 | 48.0 | 45.5 | [18](#_ENREF_18) |
| N092 | 126.98 | -81.4593 | 46.6 | 43.8 | [18](#_ENREF_18) |
| N100 | 122.61 | -81.6525 | 45.5 | 42.6 | [18](#_ENREF_18) |
| N108 | 117.605 | -81.8795 | 47.0 | 43.9 | [18](#_ENREF_18) |
| N116 | 112.571 | -82.0098 | 45.1 | 41.9 | [18](#_ENREF_18) |
| N124 | 107.6406 | -82.0745 | 47.9 | 44.5 | [21](#_ENREF_21) |
| N132 | 101.9534 | -82.0751 | 45.3 | 41.9 | [21](#_ENREF_21) |
| N140 | 96.7692 | -82.0086 | 49.3 | 45.7 | [21](#_ENREF_21) |
| N156 | 86.5045 | -81.6726 | 46.3 | 42.4 | [21](#_ENREF_21) |
| N165 | 81.7604 | -81.4084 | 56.5 | 52.5 | [21](#_ENREF_21) |
| N173 | 77.4736 | -81.1122 | 59.2 | 55.2 | [21](#_ENREF_21) |
| N182 | 73.1898 | -80.7363 | 57.8 | 53.7 | [21](#_ENREF_21) |
| N190 | 69.431 | -80.3275 | 51.5 | 47.6 | [21](#_ENREF_21) |
| N198 | 65.9607 | -79.8597 | 53.4 | 49.6 | [21](#_ENREF_21) |
| N206 | 62.8556 | -79.3947 | 50.3 | 46.6 | [21](#_ENREF_21) |
| N215 | 59.9943 | -78.9045 | 47.9 | 44.4 | [21](#_ENREF_21) |
| NOVO | 11.835 | -70.776 | 42.0 | 41.8 | [6](#_ENREF_6) |
| OND | -125.7358 | -80.7456 | 28.0 | 26.9 | [10](#_ENREF_10) |
| P061 | 77.2238 | -84.4996 | 46.1 | 42.6 | [21](#_ENREF_21) |
| P071 | 77.3347 | -83.6465 | 43.0 | 39.4 | [21](#_ENREF_21) |
| P080 | 77.364 | -82.8054 | 48.0 | 44.2 | [21](#_ENREF_21) |
| P116 | 77.0451 | -79.5669 | 56.7 | 52.8 | [21](#_ENREF_21) |
| P124 | 77.657 | -78.8718 | 58.9 | 55.3 | [21](#_ENREF_21) |
| PECA | -68.5527 | -85.6124 | 37 | 35.5 | [9](#_ENREF_9) |
| PMSA | 296 | -64.8 | 40.0 | 39.8 | [20](#_ENREF_20) |
| \*\*PMSA | -64 | -64.8 | 36.0 | 36.0 | [15](#_ENREF_15) |
| REIN | 72.55 | -70.45 | 33.0 | 32.9 | [8](#_ENREF_8) |
| RIS51 | -61 | -74.7 | 33.0 | 33.0 | [26](#_ENREF_26) |
| RIS56 | -55 | -75.8 | 27.0 | 27.0 | [26](#_ENREF_26) |
| SAE33B | -12.5 | -71.5 | 32.0 | 32.0 | [6](#_ENREF_6),[27](#_ENREF_27) |
| SAE33E | -7.2 | -70.7 | 32.0 | 32.0 | [6](#_ENREF_6),[27](#_ENREF_27) |
| SAE34B | -10.5 | -71 | 33.0 | 33.0 | [6](#_ENREF_6),[27](#_ENREF_27) |
| SAE34E | -4.8 | -73.4 | 41.0 | 39.0 | [6](#_ENREF_6),[27](#_ENREF_27); [1](#_ENREF_1) |
| SBA | 166.7573 | -77.8491 | 21.0 | 21.0 | [11](#_ENREF_11) |
| SBA | 166.757 | -77.8491 | 21.0 | 21.0 | [5](#_ENREF_5) |
| SDM | -148.85 | -81.6148 | 27.0 | 26.3 | [10](#_ENREF_10) |
| SILY | -125.966 | -77.1332 | 32.8 | 30.7 | [9](#_ENREF_9) |
| SIPL | -148.9555 | -81.6405 | 28.03 | 27.4 | [9](#_ENREF_9) |
| SNAA | -2.838 | -71.671 | 40.0 | 39.2 | [6](#_ENREF_6) |
| SPA | 0 | -90 | 34.0 | 31.2 | [10](#_ENREF_10) |
| ST01 | -98.7419 | -83.2279 | 30.24 | 28.2 | [9](#_ENREF_9) |
| ST02 | -109.1243 | -82.069 | 34.24 | 32.5 | [9](#_ENREF_9) |
| ST03 | -113.1504 | -81.4065 | 26.53 | 24.9 | [9](#_ENREF_9) |
| ST04 | -116.5782 | -80.715 | 23.76 | 22.2 | [9](#_ENREF_9) |
| ST06 | -121.8196 | -79.3316 | 24.8 | 23.3 | [9](#_ENREF_9) |
| ST07 | -123.7953 | -78.6387 | 26.21 | 24.6 | [9](#_ENREF_9) |
| ST08 | -125.5313 | -77.9576 | 26.8 | 25.0 | [9](#_ENREF_9) |
| ST09 | -128.4734 | -76.5309 | 31.74 | 29.5 | [9](#_ENREF_9) |
| ST10 | -129.7489 | -75.8143 | 29.83 | 28.1 | [9](#_ENREF_9) |
| ST12 | -123.816 | -76.897 | 24.02 | 21.8 | [9](#_ENREF_9) |
| ST13 | -130.5139 | -77.5609 | 32.18 | 30.3 | [9](#_ENREF_9) |
| ST14 | -134.0802 | -77.8378 | 28.93 | 27.3 | [9](#_ENREF_9) |
| STC | -136.4061 | -82.3575 | 31.0 | 30.5 | [10](#_ENREF_10) |
| SURP | -171.2018 | -84.7199 | 26.5 | 26.1 | [9](#_ENREF_9) |
| THUR | -97.5606 | -72.5301 | 24.1 | 23.9 | [9](#_ENREF_9) |
| TNV | 164.12 | -74.7 | 22.1 | 22.0 | [11](#_ENREF_11) |
| UPTW | -109.0396 | -77.5797 | 22.39 | 21.1 | [9](#_ENREF_9) |
| VNDA | 161.8456 | -77.5139 | 35.6 | 35.0 | [11](#_ENREF_11) |
| \*\*VNDA | 161.846 | -77.5139 | 35.0 | 34.4 | [5](#_ENREF_5),[17](#_ENREF_17) |
| \*\*VNDA | 161.853 | -77.5172 | 35.3 | 34.7 | [18](#_ENREF_18) |
| VOSTOK | 106.48 | -78.28 | 30.0 | 26.5 | [28](#_ENREF_28) |
| \*\*VOSTOK | 106.48 | -78.28 | 35.0 | 31.5 | [29](#_ENREF_29) |
| WA-AM | 131.5 | -64 | 18.0 | 21.0 | [30](#_ENREF_30) |
| WA-AN | 132 | -63.2 | 12.0 | 16.3 | [30](#_ENREF_30) |
| WA-BM | 141 | -65.1 | 16.0 | 18.7 | [30](#_ENREF_30) |
| WA-BN | 141 | -64.1 | 7.0 | 10.6 | [30](#_ENREF_30) |
| WA-BS | 141 | -65.6 | 23.0 | 24.1 | [30](#_ENREF_30) |
| WAIS | -111.7776 | -79.4181 | 25.57 | 23.8 | [9](#_ENREF_9) |
| WEIGEL | -9.622 | -74.275 | 44.0 | 42.5 | [6](#_ENREF_6) |
| WHIT | -104.3867 | -82.6823 | 31.5 | 30.2 | [9](#_ENREF_9) |
| WILS | -80.5587 | -80.0396 | 30 | 29.3 | [9](#_ENREF_9) |
| WM72 | 11.524 | -72.144 | 50.0 | 47.4 | [6](#_ENREF_6) |
| WM73 | 11.562 | -71.437 | 45.0 | 43.6 | [6](#_ENREF_6) |
| WM79 | 13.215 | -72.04 | 51.0 | 48.6 | [6](#_ENREF_6) |
| WNDY | -119.4129 | -82.3695 | 23.17 | 22.2 | [9](#_ENREF_9) |
| WRS10 | -172.386 | -77.0717 | 18.5 | 19.0 | [19](#_ENREF_19) |
| WRS11 | -172.788 | -77.0755 | 16.5 | 17.0 | [19](#_ENREF_19) |
| WRS12 | -173.203 | -77.0892 | 14.5 | 15.0 | [19](#_ENREF_19) |
| WRS14 | -174.005 | -77.1055 | 13.5 | 14.0 | [19](#_ENREF_19) |
| WRS17 | -175.215 | -77.1052 | 20.4 | 21.0 | [19](#_ENREF_19) |
| WRS21 | -176.826 | -77.1051 | 23.4 | 24.0 | [19](#_ENREF_19) |
| WRS2 | -169.226 | -77.0939 | 15.5 | 16.0 | [19](#_ENREF_19) |
| WRS25 | -178.445 | -77.1214 | 23.4 | 24.0 | [19](#_ENREF_19) |
| WRS29 | -179.937 | -77.1218 | 23.3 | 24.0 | [19](#_ENREF_19) |
| WRS3 | -169.618 | -77.1018 | 16.5 | 17.0 | [19](#_ENREF_19) |
| WRS4 | -169.986 | -77.1021 | 16.5 | 17.0 | [19](#_ENREF_19) |
| WRS6 | -170.773 | -77.0716 | 18.5 | 19.0 | [19](#_ENREF_19) |
| WRS7 | -171.18 | -77.0539 | 19.6 | 20.0 | [19](#_ENREF_19) |
| WRS8 | -171.58 | -77.0551 | 20.5 | 21.0 | [19](#_ENREF_19) |
| WRS9 | -171.988 | -77.0641 | 20.5 | 21.0 | [19](#_ENREF_19) |
| ZHSH | 76.3727 | -69.3747 | 38.3 | 38.3 | [13](#_ENREF_13) |

Note: data sources are:

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