Table S1. Results of the dose recovery/preheat plateau performed on sample 1555. Shown are the calculated ratios of the given to measured doses, recycling ratios and recuperation values for each induced preheat temperature.

|  |  |  |  |
| --- | --- | --- | --- |
| Temperature | DR ratio | Recycling ratio | Recuperation |
| 180/160 | 1.03±0.08 | 0.95±0.06 | -0.75±0.31 |
| 200/160 | 0.98±0.05 | 1.02±0.10 | 0.07±0.20 |
| 220/160 | 0.83±0.02 | 0.93±0.05 | 1.28±1.55 |
| 240/160 | 1.10±0.10 | 0.98±0.01 | 0.23±0.37 |
| 260/160 | 1.00±0.04 | 0.96±0.04 | 1.03±0.31 |
| 280/160 | 0.69±0.05 | 0.92±0.07 | -0.12±0.14 |
| 300/160 | 0.37±0.02 | 0.98±0.07 | 1.32±1.47 |

Table S2. Summary of the Bacon age-depth modelling results for the Deliblato sands site. Presented are the minimum, maximum and mean ages generated by the Bacon software and the sedimentation rates (SR). The sedimentation rates were calculated according to the mean modelled ages. Also shown are the loess smoothed ages and sedimentation rates (see main text for details).

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Depth | Min. age (yr) | Max. age (yr) | Mean age (yr) | Sed. rate (cm kyr-1) | Sm. Age (yr) | Sm. sed. rate(cm kyr-1) |
| 260 | 12444 | 14059 | 13249 | 500 | 13249 | 493 |
| 280 | 12489 | 14099 | 13289 | 488 | 13287 | 492 |
| 300 | 12531 | 14139 | 13330 | 488 | 13326 | 491 |
| 320 | 12572 | 14179 | 13371 | 488 | 13364 | 489 |
| 340 | 12613 | 14216 | 13412 | 500 | 13403 | 488 |
| 360 | 12656 | 14259 | 13452 | 488 | 13441 | 489 |
| 380 | 12698 | 14299 | 13493 | 488 | 13479 | 488 |
| 400 | 12741 | 14333 | 13534 | 488 | 13518 | 488 |
| 420 | 12784 | 14372 | 13575 | 488 | 13556 | 490 |
| 440 | 12832 | 14411 | 13616 | 500 | 13594 | 490 |
| 460 | 12871 | 14450 | 13656 | 488 | 13633 | 491 |
| 480 | 12910 | 14491 | 13697 | 488 | 13671 | 491 |
| 500 | 12951 | 14534 | 13738 | 500 | 13710 | 492 |
| 520 | 12994 | 14572 | 13778 | 488 | 13748 | 491 |
| 540 | 13037 | 14615 | 13819 | 488 | 13786 | 492 |
| 560 | 13082 | 14649 | 13860 | 500 | 13825 | 493 |
| 580 | 13123 | 14686 | 13900 | 488 | 13863 | 495 |
| 600 | 13164 | 14727 | 13941 | 513 | 13901 | 498 |
| 620 | 13203 | 14765 | 13980 | 500 | 13940 | 499 |
| 640 | 13249 | 14801 | 14020 | 500 | 13978 | 500 |
| 660 | 13288 | 14842 | 14060 | 500 | 14017 | 500 |
| 680 | 13328 | 14883 | 14100 | 500 | 14055 | 500 |
| 700 | 13372 | 14921 | 14140 | 500 | 14093 | 501 |
| 720 | 13411 | 14961 | 14180 | 513 | 14132 | 500 |
| 740 | 13452 | 15001 | 14219 | 500 | 14170 | 500 |
| 760 | 13492 | 15045 | 14259 | 500 | 14209 | 500 |
| 780 | 13529 | 15082 | 14299 | 488 | 14247 | 498 |
| 800 | 13572 | 15122 | 14340 | 488 | 14285 | 494 |
| 820 | 13615 | 15164 | 14381 | 488 | 14324 | 490 |
| 840 | 13660 | 15205 | 14422 | 476 | 14362 | 487 |
| 860 | 13700 | 15244 | 14464 | 488 | 14400 | 486 |
| 880 | 13743 | 15287 | 14505 | 488 | 14439 | 485 |
| 900 | 13785 | 15327 | 14546 | 476 | 14477 | 484 |
| 920 | 13826 | 15373 | 14588 | 488 | 14516 | 484 |
| 940 | 13869 | 15412 | 14629 | 488 | 14554 | 485 |
| 960 | 13912 | 15447 | 14670 | 476 | 14592 | 484 |
| 980 | 13952 | 15488 | 14712 | 500 | 14631 | 486 |
| 1000 | 13994 | 15529 | 14752 | 488 | 14669 | 488 |
| 1020 | 14033 | 15573 | 14793 | 500 | 14707 | 490 |
| 1040 | 14074 | 15614 | 14833 | 488 | 14746 | 491 |
| 1060 | 14121 | 15654 | 14874 | 488 | 14784 | 492 |
| 1080 | 14161 | 15700 | 14915 | 500 | 14823 | 493 |
| 1100 | 14201 | 15740 | 14955 | 488 | 14861 | 492 |
| 1120 | 14245 | 15775 | 14996 | 500 | 14899 | 493 |
| 1140 | 14280 | 15818 | 15036 | 500 | 14938 | 494 |
| 1160 | 14319 | 15860 | 15076 | 500 | 14976 | 496 |
| 1180 | 14360 | 15897 | 15116 | 500 | 15014 | 498 |
| 1200 | 14399 | 15937 | 15156 | 488 | 15053 | 499 |
| 1220 | 14444 | 15978 | 15197 | 488 | 15091 | 497 |
| 1240 | 14481 | 16019 | 15238 | 500 | 15130 | 495 |
| 1260 | 14525 | 16056 | 15278 | 500 | 15168 | 495 |
| 1280 | 14566 | 16099 | 15318 | 476 | 15206 | 494 |
| 1300 | 14603 | 16136 | 15360 | 488 | 15245 | 492 |
| 1320 | 14645 | 16180 | 15401 | 488 | 15283 | 491 |
| 1340 | 14681 | 16221 | 15442 | 476 | 15322 | 489 |
| 1360 | 14723 | 16262 | 15484 | 500 | 15360 | 486 |
| 1380 | 14761 | 16310 | 15524 | 500 | 15398 | 486 |
| 1400 | 14800 | 16351 | 15564 | 500 | 15437 | 490 |
| 1420 | 14837 | 16392 | 15604 | 500 | 15475 | 493 |
| 1440 | 14879 | 16435 | 15644 | 488 | 15513 | 496 |
| 1460 | 14918 | 16471 | 15685 | 500 | 15552 | 499 |
| 1480 | 14958 | 16510 | 15725 | 500 | 15590 | 498 |
| 1500 | 14994 | 16549 | 15765 | 500 | 15629 | 500 |
| 1520 | 15034 | 16593 | 15805 | 500 | 15667 | 500 |
| 1540 | 15073 | 16637 | 15845 | 488 | 15705 | 500 |
| 1560 | 15111 | 16679 | 15886 | 500 | 15744 | 500 |
| 1580 | 15154 | 16720 | 15926 | 500 | 15782 | 500 |
| 1600 | 15193 | 16761 | 15966 | 500 | 15820 | 500 |
| 1620 | 15234 | 16806 | 16006 | 500 | 15859 | 500 |
| 1640 | 15266 | 16848 | 16046 | 500 | 15897 | 500 |
| 1660 | 15306 | 16883 | 16086 | 500 | 15936 | 499 |
| 1680 | 15349 | 16928 | 16126 | 488 | 15974 | 500 |
| 1700 | 15392 | 16972 | 16167 | 500 | 16012 | 500 |
| 1720 | 15426 | 17007 | 16207 | 500 | 16051 | 499 |
| 1740 | 15466 | 17048 | 16247 | 500 | 16089 | 500 |
| 1760 | 15506 | 17091 | 16287 | 513 | 16128 | 500 |
| 1780 | 15546 | 17134 | 16326 | 500 | 16166 | 498 |
| 1800 | 15584 | 17172 | 16366 | 500 | 16204 | 500 |
| 1820 | 15624 | 17211 | 16406 | 500 | 16243 | 502 |
| 1840 | 15664 | 17254 | 16446 | 488 | 16281 | 500 |
| 1860 | 15706 | 17291 | 16487 | 500 | 16319 | 502 |
| 1880 | 15747 | 17331 | 16527 | 500 | 16358 | 500 |
| 1900 | 15784 | 17375 | 16567 | 500 | 16396 | 499 |
| 1920 | 15821 | 17417 | 16607 | 500 | 16435 | 500 |
| 1940 | 15859 | 17454 | 16647 | 500 | 16473 | 500 |
| 1960 | 15899 | 17499 | 16687 | 500 | 16511 | 499 |
| 1980 | 15938 | 17538 | 16727 | 488 | 16550 | 500 |
| 2000 | 15975 | 17582 | 16768 | 500 | 16588 | 500 |
| 2020 | 16014 | 17621 | 16808 | 513 | 16626 | 500 |
| 2040 | 16054 | 17666 | 16847 | 488 | 16665 | 500 |
| 2060 | 16092 | 17707 | 16888 | 500 | 16703 | 500 |
| 2080 | 16128 | 17743 | 16928 | 513 | 16742 | 500 |
| 2100 | 16169 | 17787 | 16967 | 500 | 16780 | 498 |
| 2120 | 16208 | 17830 | 17007 | 500 | 16818 | 500 |
| 2140 | 16247 | 17878 | 17047 | 500 | 16857 | 502 |
| 2160 | 16282 | 17920 | 17087 | 500 | 16895 | 502 |
|  |  |  |  |  | 16933 | 500 |
|  |  |  |  |  | 17010 | 500 |
|  |  |  |  |  | 17049 | 500 |
|  |  |  |  |  | 17087 | 499 |