| **Supplementary Table 1 LA-ICP-MS U-Th-Pb isotopic data of zircons from sandstone samples of the Miaoling Fm. and Kedao Group in Wangqing area (shadowed lines show data with a discordance of 206Pb/238U vs 207Pb/206Pb over 10%)** | | | | | | | | | | | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Isotopic ratio | | | | | | | | Age(Ma) | | | | | | | | Th/U |
|  | *207Pb/206Pb* | 2σ | *207Pb/235U* | 2σ | *206Pb/238U* | 2σ | *208Pb/232Th* | 2σ | *207Pb/206Pb* | 2σ | *207Pb/235U* | 2σ | *206Pb/238U* | 2σ | *208Pb/232Th* | 2σ |
| 23JL34 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1 | 0.05962 | 0.00287 | 0.54225 | 0.03119 | 0.06618 | 0.00256 | 0.02248 | 0.00124 | 590 | 63 | 440 | 21 | 413 | 16 | 449 | 24 | 0.25316 |
| 2 | 0.05216 | 0.00250 | 0.28128 | 0.01424 | 0.03944 | 0.00138 | 0.01213 | 0.00071 | 293 | 57 | 252 | 11 | 249 | 9 | 244 | 14 | 0.38168 |
| 3 | 0.05624 | 0.00849 | 0.30581 | 0.04266 | 0.04006 | 0.00212 | 0.01303 | 0.00132 | 462 | 216 | 271 | 33 | 253 | 13 | 262 | 26 | 0.97087 |
| 4 | 0.05381 | 0.01513 | 0.38064 | 0.10660 | 0.05199 | 0.00210 | 0.01526 | 0.00229 | 363 | 465 | 328 | 78 | 327 | 13 | 306 | 46 | 0.83333 |
| 5 | 0.05180 | 0.00362 | 0.28067 | 0.02059 | 0.03969 | 0.00131 | 0.01058 | 0.00091 | 276 | 108 | 251 | 16 | 251 | 8 | 213 | 18 | 0.65789 |
| 6 | 0.07899 | 0.00265 | 1.66793 | 0.07355 | 0.15387 | 0.00439 | 0.05094 | 0.00213 | 971 | 183 | 931 | 49 | 915 | 26 | 912 | 23 | 0.62112 |
| 7 | 0.05454 | 0.00950 | 0.29461 | 0.05698 | 0.03962 | 0.00119 | 0.01153 | 0.00060 | 393 | 353 | 262 | 45 | 250 | 7 | 232 | 12 | 0.49751 |
| 8 | 0.05466 | 0.01404 | 0.51701 | 0.13935 | 0.06843 | 0.00273 | 0.01501 | 0.00366 | 398 | 448 | 423 | 93 | 427 | 16 | 301 | 73 | 0.32051 |
| 9 | 0.05741 | 0.00650 | 0.31285 | 0.03600 | 0.03981 | 0.00138 | 0.01284 | 0.00091 | 507 | 194 | 276 | 28 | 252 | 9 | 258 | 18 | 0.62112 |
| 10 | 0.06262 | 0.00840 | 0.54207 | 0.06646 | 0.06416 | 0.00262 | 0.02204 | 0.00373 | 695 | 194 | 440 | 44 | 401 | 16 | 441 | 74 | 0.33557 |
| 11 | 0.05923 | 0.00215 | 0.54618 | 0.02334 | 0.06745 | 0.00218 | 0.02054 | 0.00068 | 576 | 44 | 442 | 15 | 421 | 13 | 411 | 14 | 0.64516 |
| 12 | 0.05242 | 0.00874 | 0.30128 | 0.04923 | 0.04238 | 0.00246 | 0.01222 | 0.00132 | 304 | 261 | 267 | 38 | 268 | 15 | 246 | 26 | 0.46296 |
| 13 | 0.05547 | 0.00456 | 0.29960 | 0.02716 | 0.03946 | 0.00167 | 0.01307 | 0.00108 | 431 | 128 | 266 | 21 | 250 | 10 | 262 | 22 | 0.50505 |
| 14 | 0.05588 | 0.00317 | 0.30190 | 0.01569 | 0.03969 | 0.00131 | 0.01183 | 0.00056 | 448 | 60 | 268 | 12 | 251 | 8 | 238 | 11 | 0.54054 |
| 15 | 0.05404 | 0.00316 | 0.32836 | 0.02020 | 0.04446 | 0.00136 | 0.01350 | 0.00044 | 373 | 84 | 288 | 15 | 280 | 8 | 271 | 9 | 0.84746 |
| 16 | 0.05423 | 0.01340 | 0.32515 | 0.07966 | 0.04452 | 0.00249 | 0.01315 | 0.00157 | 381 | 397 | 286 | 61 | 281 | 15 | 264 | 31 | 0.53476 |
| 17 | 0.05505 | 0.00390 | 0.39089 | 0.03670 | 0.05022 | 0.00167 | 0.01681 | 0.00136 | 414 | 151 | 335 | 27 | 316 | 10 | 337 | 27 | 0.53763 |
| 18 | 0.06567 | 0.00238 | 0.93706 | 0.04134 | 0.10404 | 0.00258 | 0.03217 | 0.00124 | 796 | 52 | 671 | 22 | 638 | 15 | 640 | 24 | 0.28090 |
| 19 | 0.05184 | 0.00528 | 0.30244 | 0.03185 | 0.04298 | 0.00178 | 0.01402 | 0.00208 | 278 | 162 | 268 | 25 | 271 | 11 | 281 | 42 | 0.33670 |
| 20 | 0.05253 | 0.00791 | 0.31466 | 0.05246 | 0.04406 | 0.00174 | 0.01350 | 0.00179 | 309 | 296 | 278 | 41 | 278 | 11 | 271 | 36 | 0.52356 |
| 21 | 0.06563 | 0.00196 | 0.99411 | 0.05416 | 0.10993 | 0.00380 | 0.05497 | 0.00585 | 694 | 145 | 675 | 28 | 670 | 21 | 669 | 22 | 0.04131 |
| 22 | 0.05456 | 0.01117 | 0.33165 | 0.06494 | 0.04498 | 0.00207 | 0.01882 | 0.00661 | 394 | 335 | 291 | 50 | 284 | 13 | 377 | 131 | 0.42553 |
| 23 | 0.05682 | 0.00474 | 0.62355 | 0.05147 | 0.08070 | 0.00239 | 0.02660 | 0.01656 | 484 | 130 | 492 | 32 | 500 | 14 | 531 | 326 | 0.01766 |
| 24 | 0.05598 | 0.00551 | 0.31181 | 0.03052 | 0.04071 | 0.00137 | 0.01430 | 0.00087 | 452 | 158 | 276 | 24 | 257 | 8 | 287 | 17 | 0.20367 |
| 25 | 0.07421 | 0.00467 | 0.82044 | 0.05338 | 0.08058 | 0.00210 | 0.02909 | 0.00247 | 735 | 264 | 539 | 48 | 493 | 13 | 487 | 10 | 0.46083 |
| 26 | 0.07047 | 0.00235 | 1.28168 | 0.05535 | 0.13176 | 0.00367 | 0.03611 | 0.00146 | 942 | 46 | 838 | 25 | 798 | 21 | 717 | 28 | 0.60976 |
| 27 | 0.05682 | 0.00176 | 0.60598 | 0.02263 | 0.07615 | 0.00169 | 0.02253 | 0.00071 | 485 | 45 | 481 | 14 | 473 | 10 | 450 | 14 | 0.50761 |
| 28 | 0.05454 | 0.00283 | 0.48767 | 0.03014 | 0.06438 | 0.00190 | 0.01889 | 0.00082 | 393 | 86 | 403 | 21 | 402 | 11 | 378 | 16 | 0.57803 |
| 29 | 0.06851 | 0.00290 | 1.08992 | 0.04671 | 0.11363 | 0.00175 | 0.03636 | 0.00128 | 884 | 63 | 748 | 23 | 694 | 10 | 722 | 25 | 0.30120 |
| 30 | 0.06792 | 0.00163 | 1.36927 | 0.04082 | 0.14506 | 0.00381 | 0.04269 | 0.00138 | 866 | 28 | 876 | 17 | 873 | 21 | 845 | 27 | 0.45662 |
| 31 | 0.06903 | 0.00593 | 0.39903 | 0.03733 | 0.04132 | 0.00095 | 0.01530 | 0.00060 | 152 | 274 | 244 | 29 | 254 | 6 | 256 | 8 | 0.88496 |
| 32 | 0.05447 | 0.00342 | 0.29957 | 0.02072 | 0.03948 | 0.00128 | 0.01235 | 0.00066 | 391 | 98 | 266 | 16 | 250 | 8 | 248 | 13 | 0.58140 |
| 33 | 0.05910 | 0.00291 | 0.61172 | 0.03199 | 0.07322 | 0.00183 | 0.02359 | 0.00134 | 571 | 71 | 485 | 20 | 456 | 11 | 471 | 27 | 0.25974 |
| 34 | 0.04901 | 0.00579 | 0.26884 | 0.03280 | 0.03958 | 0.00246 | 0.01215 | 0.00072 | 148 | 162 | 242 | 26 | 250 | 15 | 244 | 14 | 0.34965 |
| 35 | 0.05015 | 0.00266 | 0.26720 | 0.01232 | 0.03933 | 0.00184 | 0.01173 | 0.00053 | 202 | 49 | 240 | 10 | 249 | 11 | 236 | 11 | 0.48780 |
| 36 | 0.05249 | 0.00155 | 0.27706 | 0.00619 | 0.03916 | 0.00139 | 0.01216 | 0.00059 | 307 | 42 | 248 | 5 | 248 | 9 | 244 | 12 | 0.29326 |
| 37 | 0.05999 | 0.00246 | 0.53377 | 0.02232 | 0.06404 | 0.00147 | 0.02226 | 0.00107 | 353 | 193 | 390 | 26 | 397 | 9 | 398 | 8 | 0.48544 |
| 38 | 0.05494 | 0.00443 | 0.29957 | 0.02559 | 0.03964 | 0.00134 | 0.01134 | 0.00053 | 410 | 131 | 266 | 20 | 251 | 8 | 228 | 11 | 2.17391 |
| 39 | 0.05270 | 0.00158 | 0.28875 | 0.00778 | 0.03979 | 0.00074 | 0.01233 | 0.00047 | 316 | 30 | 258 | 6 | 252 | 5 | 248 | 9 | 0.41152 |
| 40 | 0.05040 | 0.00174 | 0.28154 | 0.01364 | 0.04047 | 0.00142 | 0.01274 | 0.00052 | 214 | 54 | 252 | 11 | 256 | 9 | 256 | 10 | 0.50505 |
| 41 | 0.05019 | 0.00461 | 0.27227 | 0.02455 | 0.03938 | 0.00150 | 0.01094 | 0.00072 | 204 | 135 | 245 | 20 | 249 | 9 | 220 | 14 | 0.80645 |
| 42 | 0.04989 | 0.00291 | 0.27507 | 0.01473 | 0.03996 | 0.00094 | 0.01251 | 0.00061 | 190 | 81 | 247 | 12 | 253 | 6 | 251 | 12 | 0.61728 |
| 23JL36 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1 | 0.05382 | 0.00323 | 0.29215 | 0.01449 | 0.03993 | 0.00104 | 0.01347 | 0.00088 | 363 | 66 | 260 | 11 | 252 | 6 | 270 | 18 | 0.40816 |
| 2 | 0.05467 | 0.00328 | 0.30034 | 0.01955 | 0.03953 | 0.00108 | 0.01331 | 0.00092 | 399 | 97 | 267 | 15 | 250 | 7 | 267 | 18 | 0.44248 |
| 3 | 0.05582 | 0.00518 | 0.31097 | 0.02944 | 0.04033 | 0.00158 | 0.01318 | 0.00120 | 445 | 141 | 275 | 23 | 255 | 10 | 265 | 24 | 0.66667 |
| 4 | 0.05214 | 0.00479 | 0.31123 | 0.03260 | 0.04268 | 0.00122 | 0.01475 | 0.00101 | 292 | 184 | 275 | 25 | 269 | 8 | 296 | 20 | 0.72464 |
| 5 | 0.05477 | 0.00623 | 0.29764 | 0.03494 | 0.04219 | 0.00144 | 0.01314 | 0.00064 | 403 | 201 | 265 | 27 | 266 | 9 | 264 | 13 | 0.50761 |
| 6 | 0.05198 | 0.00471 | 0.28578 | 0.02488 | 0.04001 | 0.00158 | 0.01465 | 0.00126 | 285 | 127 | 255 | 20 | 253 | 10 | 294 | 25 | 0.40323 |
| 7 | 0.05848 | 0.01596 | 0.31122 | 0.08791 | 0.04053 | 0.00194 | 0.01497 | 0.00296 | 548 | 475 | 275 | 68 | 256 | 12 | 300 | 59 | 0.56180 |
| 8 | 0.05516 | 0.00862 | 0.29363 | 0.04164 | 0.03999 | 0.00153 | 0.01439 | 0.00128 | 419 | 249 | 261 | 33 | 253 | 9 | 289 | 26 | 0.54645 |
| 9 | 0.05479 | 0.00546 | 0.30227 | 0.03082 | 0.04068 | 0.00137 | 0.01364 | 0.00136 | 403 | 169 | 268 | 24 | 257 | 8 | 274 | 27 | 0.49505 |
| 10 | 0.05532 | 0.00330 | 0.30082 | 0.01960 | 0.04055 | 0.00121 | 0.01178 | 0.00071 | 425 | 92 | 267 | 15 | 256 | 8 | 237 | 14 | 0.44053 |
| 11 | 0.05184 | 0.00355 | 0.29301 | 0.01998 | 0.04079 | 0.00109 | 0.01264 | 0.00047 | 278 | 107 | 261 | 16 | 258 | 7 | 254 | 9 | 0.62112 |
| 12 | 0.05116 | 0.00749 | 0.28583 | 0.03933 | 0.04063 | 0.00143 | 0.01358 | 0.00151 | 248 | 245 | 255 | 31 | 257 | 9 | 273 | 30 | 0.48309 |
| 13 | 0.05177 | 0.00595 | 0.29444 | 0.03316 | 0.04248 | 0.00141 | 0.01388 | 0.00102 | 275 | 192 | 262 | 26 | 268 | 9 | 279 | 20 | 0.54645 |
| 14 | 0.05361 | 0.00301 | 0.27431 | 0.02019 | 0.03938 | 0.00140 | 0.01242 | 0.00073 | 355 | 103 | 246 | 16 | 249 | 9 | 250 | 15 | 0.35971 |
| 15 | 0.05269 | 0.00359 | 0.29946 | 0.01866 | 0.04162 | 0.00096 | 0.01314 | 0.00057 | 316 | 100 | 266 | 15 | 263 | 6 | 264 | 11 | 0.55556 |
| 16 | 0.05531 | 0.00864 | 0.33287 | 0.04935 | 0.04274 | 0.00145 | 0.01449 | 0.00140 | 425 | 271 | 292 | 38 | 270 | 9 | 291 | 28 | 0.62893 |
| 17 | 0.05276 | 0.00384 | 0.28791 | 0.01966 | 0.03964 | 0.00111 | 0.01422 | 0.00087 | 318 | 105 | 257 | 15 | 251 | 7 | 285 | 17 | 0.43860 |
| 18 | 0.05483 | 0.00282 | 0.39233 | 0.02299 | 0.05188 | 0.00092 | 0.01681 | 0.00062 | 405 | 99 | 336 | 17 | 326 | 6 | 337 | 12 | 0.62893 |
| 19 | 0.05482 | 0.00326 | 0.31094 | 0.01803 | 0.04108 | 0.00119 | 0.01267 | 0.00060 | 405 | 79 | 275 | 14 | 260 | 7 | 255 | 12 | 0.83333 |
| 20 | 0.05170 | 0.00448 | 0.29060 | 0.02378 | 0.04188 | 0.00155 | 0.01287 | 0.00098 | 272 | 120 | 259 | 19 | 264 | 10 | 258 | 20 | 0.55866 |
| 21 | 0.05540 | 0.01789 | 0.35004 | 0.12148 | 0.04925 | 0.00200 | 0.01582 | 0.00169 | 429 | 577 | 305 | 91 | 310 | 12 | 317 | 34 | 0.64516 |
| 22 | 0.05058 | 0.00348 | 0.28211 | 0.02165 | 0.04123 | 0.00145 | 0.01305 | 0.00088 | 222 | 112 | 252 | 17 | 260 | 9 | 262 | 18 | 0.41322 |
| 23 | 0.05443 | 0.00316 | 0.29975 | 0.01804 | 0.03954 | 0.00102 | 0.01230 | 0.00055 | 389 | 89 | 266 | 14 | 250 | 6 | 247 | 11 | 0.53191 |
| 24 | 0.05296 | 0.00221 | 0.28562 | 0.01015 | 0.03960 | 0.00124 | 0.01187 | 0.00029 | 327 | 36 | 255 | 8 | 250 | 8 | 239 | 6 | 0.52083 |
| 25 | 0.05601 | 0.00404 | 0.30552 | 0.02065 | 0.03931 | 0.00138 | 0.01285 | 0.00092 | 453 | 89 | 271 | 16 | 249 | 9 | 258 | 18 | 0.49261 |
| 26 | 0.05593 | 0.00296 | 0.30649 | 0.01597 | 0.03961 | 0.00099 | 0.01262 | 0.00064 | 449 | 72 | 271 | 12 | 250 | 6 | 253 | 13 | 0.58140 |
| 27 | 0.05499 | 0.00615 | 0.29760 | 0.03518 | 0.03959 | 0.00151 | 0.01387 | 0.00150 | 412 | 196 | 265 | 28 | 250 | 9 | 278 | 30 | 0.44843 |
| 28 | 0.05670 | 0.00291 | 0.34025 | 0.01624 | 0.04350 | 0.00078 | 0.01444 | 0.00047 | 480 | 74 | 297 | 12 | 275 | 5 | 290 | 9 | 0.63694 |
| 29 | 0.05511 | 0.00418 | 0.30931 | 0.02428 | 0.04035 | 0.00119 | 0.01341 | 0.00071 | 417 | 123 | 274 | 19 | 255 | 7 | 269 | 14 | 0.74074 |
| 30 | 0.04982 | 0.00415 | 0.27215 | 0.02347 | 0.03930 | 0.00119 | 0.01239 | 0.00069 | 186 | 138 | 244 | 19 | 248 | 7 | 249 | 14 | 0.61728 |
| 31 | 0.05780 | 0.00701 | 0.32203 | 0.04342 | 0.04171 | 0.00158 | 0.01185 | 0.00104 | 522 | 232 | 283 | 33 | 263 | 10 | 238 | 21 | 0.75758 |
| 32 | 0.05422 | 0.00507 | 0.30226 | 0.02852 | 0.03993 | 0.00113 | 0.01233 | 0.00077 | 380 | 162 | 268 | 22 | 252 | 7 | 248 | 15 | 0.78740 |
| 33 | 0.04991 | 0.00512 | 0.26903 | 0.02639 | 0.03962 | 0.00143 | 0.01240 | 0.00085 | 191 | 154 | 242 | 21 | 250 | 9 | 249 | 17 | 0.47619 |
| 34 | 0.05463 | 0.00643 | 0.30919 | 0.03610 | 0.04065 | 0.00145 | 0.01480 | 0.00132 | 397 | 197 | 274 | 28 | 257 | 9 | 297 | 26 | 0.42373 |
| 35 | 0.05770 | 0.01526 | 0.29632 | 0.07105 | 0.03912 | 0.00246 | 0.01058 | 0.00233 | 518 | 393 | 264 | 56 | 247 | 15 | 213 | 47 | 0.49261 |
| 36 | 0.05718 | 0.00436 | 0.29888 | 0.02151 | 0.04041 | 0.00109 | 0.01234 | 0.00078 | 498 | 111 | 266 | 17 | 255 | 7 | 248 | 16 | 0.51813 |
| 37 | 0.05356 | 0.00733 | 0.30600 | 0.04388 | 0.04173 | 0.00162 | 0.01320 | 0.00131 | 353 | 251 | 271 | 34 | 264 | 10 | 265 | 26 | 0.58140 |
| 38 | 0.05315 | 0.00419 | 0.30547 | 0.02384 | 0.04116 | 0.00085 | 0.01341 | 0.00051 | 335 | 140 | 271 | 19 | 260 | 5 | 269 | 10 | 0.80645 |
| 39 | 0.05485 | 0.00427 | 0.31859 | 0.02516 | 0.04232 | 0.00151 | 0.01315 | 0.00083 | 406 | 113 | 281 | 19 | 267 | 9 | 264 | 17 | 0.53476 |
| 40 | 0.05548 | 0.00666 | 0.30561 | 0.03317 | 0.04139 | 0.00127 | 0.01276 | 0.00094 | 431 | 189 | 271 | 26 | 261 | 8 | 256 | 19 | 0.54348 |
| 41 | 0.05441 | 0.00278 | 0.32654 | 0.01631 | 0.04309 | 0.00166 | 0.01321 | 0.00083 | 388 | 52 | 287 | 12 | 272 | 10 | 265 | 16 | 0.31056 |
| 42 | 0.05385 | 0.00427 | 0.32145 | 0.02624 | 0.04309 | 0.00126 | 0.01407 | 0.00123 | 365 | 132 | 283 | 20 | 272 | 8 | 282 | 24 | 0.39370 |
| 43 | 0.05496 | 0.00601 | 0.30851 | 0.03307 | 0.04148 | 0.00150 | 0.01359 | 0.00140 | 410 | 176 | 273 | 26 | 262 | 9 | 273 | 28 | 0.43668 |
| 44 | 0.05144 | 0.00221 | 0.29920 | 0.01862 | 0.04224 | 0.00103 | 0.01232 | 0.00058 | 261 | 98 | 266 | 15 | 267 | 6 | 247 | 12 | 0.46948 |
| 45 | 0.15224 | 0.02474 | 1.06544 | 0.23465 | 0.04752 | 0.00265 | 0.03425 | 0.00647 | 393 | 1179 | 272 | 174 | 259 | 15 | 257 | 98 | 0.63291 |
| 46 | 0.05236 | 0.00291 | 0.31887 | 0.01995 | 0.04379 | 0.00115 | 0.01466 | 0.00080 | 301 | 95 | 281 | 15 | 276 | 7 | 294 | 16 | 0.59880 |
| 47 | 0.05767 | 0.00250 | 0.54464 | 0.02535 | 0.06873 | 0.00165 | 0.02021 | 0.00094 | 517 | 61 | 441 | 17 | 428 | 10 | 404 | 19 | 0.38314 |
| 48 | 0.05652 | 0.00435 | 0.32062 | 0.02472 | 0.04091 | 0.00129 | 0.01401 | 0.00078 | 473 | 115 | 282 | 19 | 258 | 8 | 281 | 16 | 0.51546 |
| 49 | 0.05361 | 0.00537 | 0.31202 | 0.03274 | 0.04147 | 0.00123 | 0.01421 | 0.00119 | 355 | 182 | 276 | 25 | 262 | 8 | 285 | 24 | 0.52632 |
| 50 | 0.05863 | 0.00643 | 0.32263 | 0.03736 | 0.04140 | 0.00180 | 0.01371 | 0.00138 | 553 | 178 | 284 | 29 | 262 | 11 | 275 | 28 | 0.57471 |
| 23JL38 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1 | 0.05688 | 0.00305 | 0.58659 | 0.04181 | 0.07439 | 0.00288 | 0.02319 | 0.00149 | 487 | 91 | 469 | 27 | 463 | 17 | 463 | 29 | 0.53763 |
| 2 | 0.08972 | 0.00173 | 3.26457 | 0.07267 | 0.26015 | 0.00465 | 0.07642 | 0.00219 | 1420 | 19 | 1473 | 17 | 1491 | 24 | 1488 | 41 | 0.24631 |
| 3 | 0.05293 | 0.00108 | 0.33284 | 0.00971 | 0.04496 | 0.00089 | 0.01444 | 0.00044 | 326 | 33 | 292 | 7 | 283 | 5 | 290 | 9 | 0.24096 |
| 4 | 0.06985 | 0.00258 | 1.64481 | 0.09293 | 0.16869 | 0.00646 | 0.05022 | 0.00225 | 924 | 58 | 988 | 36 | 1005 | 36 | 990 | 43 | 0.27624 |
| 5 | 0.07005 | 0.00617 | 0.39313 | 0.03557 | 0.04064 | 0.00104 | 0.01436 | 0.00074 | 487 | 328 | 277 | 35 | 253 | 7 | 249 | 5 | 0.73529 |
| 6 | 0.06147 | 0.00247 | 0.34117 | 0.01497 | 0.04004 | 0.00090 | 0.01562 | 0.00090 | 193 | 195 | 244 | 18 | 249 | 6 | 250 | 6 | 0.39370 |
| 7 | 0.06284 | 0.00162 | 0.68996 | 0.01790 | 0.07971 | 0.00201 | 0.02601 | 0.00050 | 703 | 25 | 533 | 11 | 494 | 12 | 519 | 10 | 0.71942 |
| 8 | 0.07006 | 0.00130 | 1.42728 | 0.03362 | 0.14768 | 0.00280 | 0.04865 | 0.00130 | 930 | 22 | 900 | 14 | 888 | 16 | 960 | 25 | 0.28736 |
| 9 | 0.05031 | 0.00416 | 0.28318 | 0.02189 | 0.04116 | 0.00106 | 0.01302 | 0.00092 | 210 | 128 | 253 | 17 | 260 | 7 | 261 | 18 | 0.64935 |
| 10 | 0.06131 | 0.00245 | 0.74409 | 0.03298 | 0.08813 | 0.00268 | 0.02828 | 0.00118 | 650 | 47 | 565 | 19 | 544 | 16 | 564 | 23 | 0.45045 |
| 11 | 0.05880 | 0.00420 | 0.33062 | 0.02467 | 0.04078 | 0.00110 | 0.01425 | 0.00079 | 233 | 259 | 253 | 25 | 255 | 7 | 255 | 7 | 0.55866 |
| 12 | 0.07114 | 0.00163 | 1.21404 | 0.07891 | 0.12338 | 0.00756 | 0.03730 | 0.00246 | 962 | 60 | 807 | 36 | 750 | 43 | 740 | 48 | 0.28249 |
| 13 | 0.05498 | 0.00253 | 0.32729 | 0.01483 | 0.04319 | 0.00100 | 0.01521 | 0.00066 | 411 | 60 | 287 | 11 | 273 | 6 | 305 | 13 | 0.38610 |
| 14 | 0.07182 | 0.00171 | 1.60908 | 0.04414 | 0.16280 | 0.00385 | 0.04997 | 0.00224 | 981 | 25 | 974 | 17 | 972 | 21 | 986 | 43 | 0.17483 |
| 15 | 0.07256 | 0.00167 | 1.52447 | 0.04632 | 0.15215 | 0.00336 | 0.04979 | 0.00163 | 927 | 99 | 915 | 25 | 910 | 19 | 909 | 19 | 0.29674 |
| 16 | 0.07283 | 0.00883 | 0.41500 | 0.04344 | 0.04268 | 0.00104 | 0.01656 | 0.00097 |  | 197 | 237 | 19 | 261 | 5 | 285 | 18 | 1.14943 |
| 17 | 0.06342 | 0.00213 | 0.68204 | 0.02410 | 0.07805 | 0.00109 | 0.02662 | 0.00093 | 552 | 118 | 494 | 20 | 482 | 7 | 480 | 5 | 0.38314 |
| 18 | 0.05312 | 0.00265 | 0.30265 | 0.01523 | 0.04168 | 0.00093 | 0.01340 | 0.00065 | 334 | 74 | 268 | 12 | 263 | 6 | 269 | 13 | 0.69444 |
| 19 | 0.06782 | 0.00210 | 1.22639 | 0.03644 | 0.13286 | 0.00267 | 0.04183 | 0.00089 | 863 | 31 | 813 | 17 | 804 | 15 | 828 | 17 | 0.76336 |
| 20 | 0.06985 | 0.00163 | 1.22311 | 0.03516 | 0.12813 | 0.00320 | 0.03825 | 0.00150 | 924 | 26 | 811 | 16 | 777 | 18 | 759 | 29 | 0.11976 |
| 21 | 0.10675 | 0.00720 | 0.62700 | 0.04641 | 0.04276 | 0.00097 | 0.02723 | 0.00166 | 278 | 333 | 254 | 36 | 251 | 6 | 251 | 17 | 0.41667 |
| 22 | 0.08051 | 0.00175 | 2.28437 | 0.06037 | 0.20653 | 0.00448 | 0.06325 | 0.00219 | 1209 | 24 | 1207 | 19 | 1210 | 24 | 1240 | 42 | 0.49505 |
| 23 | 0.06137 | 0.00155 | 0.69780 | 0.02441 | 0.08272 | 0.00280 | 0.02577 | 0.00118 | 652 | 34 | 537 | 15 | 512 | 17 | 514 | 23 | 0.26385 |
| 24 | 0.06847 | 0.00163 | 1.48806 | 0.06390 | 0.15698 | 0.00472 | 0.04962 | 0.00202 | 883 | 44 | 926 | 26 | 940 | 26 | 979 | 39 | 0.16155 |
| 25 | 0.05420 | 0.00213 | 0.29957 | 0.01227 | 0.03990 | 0.00104 | 0.01308 | 0.00043 | 379 | 48 | 266 | 10 | 252 | 6 | 263 | 8 | 0.53763 |
| 26 | 0.07043 | 0.00234 | 1.18673 | 0.06025 | 0.12241 | 0.00444 | 0.04353 | 0.00348 | 941 | 50 | 794 | 28 | 744 | 25 | 861 | 67 | 0.12407 |
| 27 | 0.05257 | 0.00146 | 0.34775 | 0.01348 | 0.04817 | 0.00098 | 0.01502 | 0.00047 | 310 | 52 | 303 | 10 | 303 | 6 | 301 | 9 | 0.62112 |
| 28 | 0.05096 | 0.00130 | 0.28790 | 0.00992 | 0.04071 | 0.00079 | 0.01275 | 0.00035 | 239 | 45 | 257 | 8 | 257 | 5 | 256 | 7 | 0.42194 |
| 29 | 0.04765 | 0.00225 | 0.27345 | 0.01433 | 0.04170 | 0.00094 | 0.01322 | 0.00048 | 82 | 76 | 245 | 11 | 263 | 6 | 265 | 9 | 0.58140 |
| 30 | 0.05082 | 0.00133 | 0.27988 | 0.01009 | 0.03968 | 0.00107 | 0.01259 | 0.00028 | 233 | 39 | 251 | 8 | 251 | 7 | 253 | 6 | 0.35714 |
| 31 | 0.07025 | 0.00200 | 1.01567 | 0.06801 | 0.10253 | 0.00516 | 0.04272 | 0.00201 | 725 | 227 | 645 | 43 | 623 | 30 | 619 | 29 | 0.19763 |
| 32 | 0.05684 | 0.00115 | 0.64132 | 0.01679 | 0.07976 | 0.00129 | 0.02570 | 0.00067 | 485 | 31 | 503 | 10 | 495 | 8 | 513 | 13 | 0.29412 |
| 33 | 0.07236 | 0.00390 | 0.41850 | 0.02394 | 0.04090 | 0.00073 | 0.01522 | 0.00057 | 437 | 241 | 271 | 25 | 252 | 5 | 250 | 3 | 0.72464 |
| 34 | 0.07145 | 0.00204 | 1.56466 | 0.06098 | 0.15710 | 0.00350 | 0.04857 | 0.00173 | 970 | 44 | 956 | 24 | 941 | 20 | 959 | 33 | 0.78125 |
| 35 | 0.06583 | 0.00206 | 1.18226 | 0.04129 | 0.12780 | 0.00263 | 0.04078 | 0.00141 | 801 | 40 | 792 | 19 | 775 | 15 | 808 | 27 | 0.40000 |
| 36 | 0.09301 | 0.00310 | 1.12028 | 0.05406 | 0.08571 | 0.00257 | 0.03784 | 0.00178 | 587 | 301 | 522 | 53 | 507 | 16 | 505 | 13 | 0.64103 |
| 37 | 0.06419 | 0.00140 | 0.79598 | 0.02323 | 0.08869 | 0.00151 | 0.02860 | 0.00285 | 748 | 34 | 595 | 13 | 548 | 9 | 570 | 56 | 0.04227 |
| 38 | 0.05200 | 0.00184 | 0.31607 | 0.01321 | 0.04388 | 0.00105 | 0.01354 | 0.00034 | 285 | 53 | 279 | 10 | 277 | 7 | 272 | 7 | 0.62893 |
| 39 | 0.06482 | 0.00642 | 0.35675 | 0.04018 | 0.03995 | 0.00144 | 0.01415 | 0.00091 | 419 | 344 | 267 | 37 | 249 | 9 | 247 | 8 | 0.54945 |
| 40 | 0.06115 | 0.00175 | 0.76357 | 0.02903 | 0.08951 | 0.00163 | 0.02942 | 0.00092 | 644 | 51 | 576 | 17 | 553 | 10 | 586 | 18 | 0.49505 |
| 41 | 0.06550 | 0.00377 | 1.05906 | 0.06732 | 0.11921 | 0.00453 | 0.04025 | 0.00297 | 790 | 72 | 733 | 33 | 726 | 26 | 798 | 58 | 0.16722 |
| 42 | 0.05735 | 0.00357 | 0.34734 | 0.01984 | 0.04419 | 0.00127 | 0.01461 | 0.00052 | 505 | 76 | 303 | 15 | 279 | 8 | 293 | 10 | 0.55556 |
| 43 | 0.05411 | 0.00177 | 0.32018 | 0.01119 | 0.04288 | 0.00088 | 0.01509 | 0.00069 | 376 | 43 | 282 | 9 | 271 | 5 | 303 | 14 | 0.26178 |
| 44 | 0.05206 | 0.00166 | 0.30747 | 0.01000 | 0.04309 | 0.00082 | 0.01357 | 0.00032 | 288 | 41 | 272 | 8 | 272 | 5 | 272 | 6 | 0.84034 |
| 45 | 0.06042 | 0.00391 | 0.34256 | 0.02337 | 0.04095 | 0.00067 | 0.01373 | 0.00045 | 399 | 208 | 271 | 21 | 257 | 4 | 255 | 3 | 0.62500 |
| 46 | 0.05241 | 0.00162 | 0.29140 | 0.00972 | 0.04026 | 0.00073 | 0.01307 | 0.00050 | 303 | 44 | 260 | 8 | 254 | 5 | 262 | 10 | 0.41494 |
| 47 | 0.05392 | 0.00339 | 0.35286 | 0.02175 | 0.04767 | 0.00112 | 0.01632 | 0.00082 | 368 | 97 | 307 | 16 | 300 | 7 | 327 | 16 | 0.57471 |
| 48 | 0.05679 | 0.00109 | 0.63846 | 0.01375 | 0.08127 | 0.00144 | 0.02549 | 0.00052 | 483 | 22 | 501 | 9 | 504 | 9 | 509 | 10 | 0.59172 |
| 49 | 0.04823 | 0.00316 | 0.26793 | 0.01716 | 0.04060 | 0.00102 | 0.01293 | 0.00037 | 111 | 97 | 241 | 14 | 257 | 6 | 260 | 7 | 1.05263 |
| 50 | 0.05146 | 0.00225 | 0.30133 | 0.01530 | 0.04289 | 0.00104 | 0.01382 | 0.00048 | 261 | 72 | 267 | 12 | 271 | 6 | 277 | 10 | 0.42017 |
| 23JL30 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1 | 0.05230 | 0.00110 | 0.30125 | 0.00963 | 0.04154 | 0.00128 | 0.01278 | 0.00028 | 299 | 33 | 267 | 8 | 262 | 8 | 257 | 6 | 0.29070 |
| 2 | 0.06957 | 0.00151 | 1.28305 | 0.03733 | 0.13399 | 0.00279 | 0.04208 | 0.00116 | 916 | 29 | 838 | 17 | 811 | 16 | 833 | 22 | 0.52910 |
| 3 | 0.05618 | 0.00368 | 0.30287 | 0.02031 | 0.03879 | 0.00100 | 0.01199 | 0.00078 | 459 | 103 | 269 | 16 | 245 | 6 | 241 | 16 | 0.45249 |
| 4 | 0.05097 | 0.00174 | 0.27874 | 0.01004 | 0.03948 | 0.00083 | 0.01181 | 0.00051 | 240 | 46 | 250 | 8 | 250 | 5 | 237 | 10 | 0.43290 |
| 5 | 0.05338 | 0.00203 | 0.29105 | 0.01062 | 0.03937 | 0.00080 | 0.01281 | 0.00044 | 345 | 47 | 259 | 8 | 249 | 5 | 257 | 9 | 0.40161 |
| 6 | 0.05860 | 0.00172 | 0.57302 | 0.02050 | 0.07067 | 0.00191 | 0.01983 | 0.00081 | 552 | 37 | 460 | 13 | 440 | 12 | 397 | 16 | 0.46948 |
| 7 | 0.05692 | 0.00235 | 0.31546 | 0.01234 | 0.04014 | 0.00105 | 0.01281 | 0.00047 | 488 | 44 | 278 | 10 | 254 | 7 | 257 | 9 | 0.78125 |
| 8 | 0.05265 | 0.00270 | 0.28265 | 0.01116 | 0.03842 | 0.00112 | 0.01116 | 0.00037 | 314 | 43 | 253 | 9 | 243 | 7 | 224 | 7 | 0.50505 |
| 9 | 0.05642 | 0.00566 | 0.29029 | 0.02557 | 0.03789 | 0.00139 | 0.01075 | 0.00074 | 469 | 131 | 259 | 20 | 240 | 9 | 216 | 15 | 0.47170 |
| 10 | 0.07604 | 0.00189 | 1.56103 | 0.03312 | 0.14612 | 0.00231 | 0.05251 | 0.00161 | 938 | 80 | 890 | 20 | 871 | 13 | 868 | 13 | 0.32787 |
| 11 | 0.06238 | 0.00573 | 0.58403 | 0.05055 | 0.06944 | 0.00215 | 0.02204 | 0.00219 | 687 | 132 | 467 | 32 | 433 | 13 | 441 | 43 | 0.56497 |
| 12 | 0.05688 | 0.00372 | 0.30082 | 0.02103 | 0.03853 | 0.00107 | 0.01235 | 0.00066 | 487 | 105 | 267 | 16 | 244 | 7 | 248 | 13 | 0.70922 |
| 13 | 0.05233 | 0.00410 | 0.27681 | 0.02245 | 0.03819 | 0.00108 | 0.01191 | 0.00088 | 300 | 133 | 248 | 18 | 242 | 7 | 239 | 18 | 0.47170 |
| 14 | 0.05611 | 0.00290 | 0.30317 | 0.01776 | 0.03898 | 0.00065 | 0.01183 | 0.00065 | 457 | 100 | 269 | 14 | 247 | 4 | 238 | 13 | 0.40161 |
| 15 | 0.05307 | 0.00341 | 0.29190 | 0.01924 | 0.03993 | 0.00100 | 0.01303 | 0.00057 | 332 | 104 | 260 | 15 | 252 | 6 | 262 | 11 | 0.84746 |
| 16 | 0.06824 | 0.00149 | 1.24205 | 0.04556 | 0.13138 | 0.00422 | 0.03783 | 0.00187 | 876 | 34 | 820 | 21 | 796 | 24 | 751 | 36 | 0.30488 |
| 17 | 0.05542 | 0.00279 | 0.29369 | 0.01544 | 0.03808 | 0.00080 | 0.01189 | 0.00051 | 429 | 80 | 261 | 12 | 241 | 5 | 239 | 10 | 0.54645 |
| 18 | 0.06170 | 0.00232 | 0.64807 | 0.02505 | 0.07559 | 0.00138 | 0.02367 | 0.00087 | 664 | 52 | 507 | 15 | 470 | 8 | 473 | 17 | 0.83333 |
| 19 | 0.05268 | 0.00379 | 0.28482 | 0.02026 | 0.03880 | 0.00105 | 0.01197 | 0.00042 | 315 | 112 | 254 | 16 | 245 | 7 | 241 | 8 | 0.87719 |
| 20 | 0.07083 | 0.00126 | 1.38181 | 0.03689 | 0.14041 | 0.00368 | 0.03294 | 0.00179 | 953 | 25 | 881 | 16 | 847 | 21 | 655 | 35 | 0.15649 |
| 21 | 0.05405 | 0.00123 | 0.29022 | 0.00918 | 0.03914 | 0.00101 | 0.01236 | 0.00045 | 373 | 32 | 259 | 7 | 247 | 6 | 248 | 9 | 0.45455 |
| 22 | 0.05250 | 0.00192 | 0.28295 | 0.01266 | 0.03854 | 0.00077 | 0.01209 | 0.00046 | 307 | 66 | 253 | 10 | 244 | 5 | 243 | 9 | 0.43668 |
| 23 | 0.06955 | 0.00290 | 1.33178 | 0.05823 | 0.13904 | 0.00348 | 0.03661 | 0.00214 | 915 | 50 | 860 | 25 | 839 | 20 | 727 | 42 | 0.19608 |
| 24 | 0.05940 | 0.00226 | 0.58208 | 0.03080 | 0.07155 | 0.00249 | 0.01975 | 0.00080 | 582 | 59 | 466 | 20 | 446 | 15 | 395 | 16 | 0.44843 |
| 25 | 0.06301 | 0.00195 | 0.63513 | 0.02054 | 0.07317 | 0.00148 | 0.02241 | 0.00075 | 709 | 36 | 499 | 13 | 455 | 9 | 448 | 15 | 0.37594 |
| 26 | 0.05399 | 0.00216 | 0.39820 | 0.01657 | 0.05359 | 0.00122 | 0.01635 | 0.00055 | 371 | 54 | 340 | 12 | 337 | 7 | 328 | 11 | 2.12766 |
| 27 | 0.05691 | 0.00343 | 0.69368 | 0.04396 | 0.08604 | 0.00214 | 0.02685 | 0.00113 | 488 | 96 | 535 | 26 | 532 | 13 | 536 | 22 | 0.66225 |
| 28 | 0.05620 | 0.00271 | 0.33036 | 0.01708 | 0.04215 | 0.00078 | 0.01292 | 0.00057 | 460 | 82 | 290 | 13 | 266 | 5 | 260 | 11 | 0.71942 |
| 29 | 0.05835 | 0.00244 | 0.57571 | 0.02402 | 0.07064 | 0.00141 | 0.02345 | 0.00073 | 455 | 139 | 441 | 20 | 438 | 9 | 438 | 7 | 0.36900 |
| 30 | 0.07106 | 0.00167 | 1.38241 | 0.03609 | 0.14190 | 0.00311 | 0.04616 | 0.00258 | 959 | 24 | 881 | 15 | 855 | 18 | 912 | 50 | 0.12210 |
| 31 | 0.05904 | 0.00247 | 0.42917 | 0.01555 | 0.05291 | 0.00134 | 0.01593 | 0.00069 | 569 | 39 | 363 | 11 | 332 | 8 | 319 | 14 | 0.53191 |
| 32 | 0.07097 | 0.00688 | 0.40792 | 0.04192 | 0.04149 | 0.00134 | 0.01513 | 0.00118 | 432 | 377 | 275 | 43 | 257 | 8 | 254 | 9 | 0.70922 |
| 33 | 0.05600 | 0.00240 | 0.29295 | 0.01408 | 0.03810 | 0.00090 | 0.01099 | 0.00073 | 452 | 65 | 261 | 11 | 241 | 6 | 221 | 15 | 0.27027 |
| 34 | 0.05695 | 0.01142 | 0.31712 | 0.06372 | 0.04055 | 0.00183 | 0.01267 | 0.00199 | 490 | 358 | 280 | 49 | 256 | 11 | 254 | 40 | 0.54645 |
| 35 | 0.06236 | 0.00673 | 0.53674 | 0.04718 | 0.06488 | 0.00261 | 0.02060 | 0.00221 | 686 | 120 | 436 | 31 | 405 | 16 | 412 | 44 | 0.39841 |
| 36 | 0.05518 | 0.00502 | 0.30078 | 0.03042 | 0.03955 | 0.00105 | 0.01272 | 0.00090 | 420 | 179 | 267 | 24 | 250 | 7 | 256 | 18 | 0.84034 |
| 37 | 0.05258 | 0.00224 | 0.27895 | 0.01174 | 0.03857 | 0.00095 | 0.01124 | 0.00054 | 311 | 53 | 250 | 9 | 244 | 6 | 226 | 11 | 0.49020 |
| 38 | 0.05707 | 0.00696 | 0.40913 | 0.05138 | 0.05143 | 0.00126 | 0.01605 | 0.00129 | 494 | 237 | 348 | 37 | 323 | 8 | 322 | 26 | 0.75758 |
| 39 | 0.05635 | 0.00217 | 0.32714 | 0.01423 | 0.04195 | 0.00098 | 0.01339 | 0.00045 | 466 | 56 | 287 | 11 | 265 | 6 | 269 | 9 | 0.67114 |
| 40 | 0.07924 | 0.00200 | 2.03571 | 0.06330 | 0.18579 | 0.00335 | 0.05275 | 0.00151 | 1178 | 34 | 1128 | 21 | 1099 | 18 | 1039 | 29 | 0.28490 |
| 41 | 0.06999 | 0.01389 | 1.26436 | 0.22960 | 0.13579 | 0.00451 | 0.04129 | 0.00420 | 928 | 335 | 830 | 103 | 821 | 26 | 818 | 82 | 0.14599 |
| 42 | 0.05196 | 0.00138 | 0.28996 | 0.00884 | 0.04024 | 0.00085 | 0.01188 | 0.00037 | 284 | 34 | 259 | 7 | 254 | 5 | 239 | 7 | 0.42553 |
| 43 | 0.05347 | 0.00225 | 0.28849 | 0.01458 | 0.03888 | 0.00093 | 0.01265 | 0.00054 | 349 | 71 | 257 | 11 | 246 | 6 | 254 | 11 | 0.50761 |
| 44 | 0.07072 | 0.00154 | 1.42458 | 0.03526 | 0.14534 | 0.00232 | 0.03549 | 0.00193 | 949 | 26 | 899 | 15 | 875 | 13 | 705 | 38 | 0.07837 |
| 45 | 0.07121 | 0.00328 | 1.40164 | 0.06989 | 0.14450 | 0.00334 | 0.04033 | 0.00309 | 963 | 64 | 890 | 30 | 870 | 19 | 799 | 60 | 0.10741 |
| 46 | 0.05304 | 0.00275 | 0.28134 | 0.01663 | 0.03820 | 0.00101 | 0.01187 | 0.00060 | 331 | 86 | 252 | 13 | 242 | 6 | 239 | 12 | 0.54645 |
| 47 | 0.06511 | 0.00643 | 0.34131 | 0.03208 | 0.03819 | 0.00125 | 0.01360 | 0.00092 | 358 | 328 | 250 | 33 | 238 | 8 | 237 | 7 | 0.61728 |
| 48 | 0.05569 | 0.00207 | 0.59510 | 0.02809 | 0.07775 | 0.00198 | 0.02064 | 0.00117 | 440 | 61 | 474 | 18 | 483 | 12 | 413 | 23 | 0.36101 |
| 49 | 0.05400 | 0.00206 | 0.43247 | 0.01790 | 0.05785 | 0.00106 | 0.01754 | 0.00045 | 371 | 60 | 365 | 13 | 363 | 6 | 351 | 9 | 0.80000 |
| 50 | 0.05038 | 0.00180 | 0.28809 | 0.01192 | 0.04148 | 0.00067 | 0.01237 | 0.00041 | 213 | 66 | 257 | 9 | 262 | 4 | 248 | 8 | 0.37175 |
| 51 | 0.05690 | 0.00491 | 0.38497 | 0.03658 | 0.04817 | 0.00153 | 0.01557 | 0.00091 | 488 | 154 | 331 | 27 | 303 | 9 | 312 | 18 | 1.08696 |
| 52 | 0.05333 | 0.00317 | 0.29752 | 0.01646 | 0.04059 | 0.00089 | 0.01277 | 0.00046 | 343 | 85 | 264 | 13 | 257 | 6 | 257 | 9 | 1.13636 |
| 53 | 0.09092 | 0.01378 | 1.10368 | 0.19509 | 0.08574 | 0.00178 | 0.04603 | 0.00929 | 527 | 599 | 511 | 125 | 507 | 11 | 507 | 94 | 0.39063 |
| 54 | 0.05788 | 0.00195 | 0.61535 | 0.02002 | 0.07763 | 0.00159 | 0.02390 | 0.00085 | 525 | 37 | 487 | 13 | 482 | 9 | 477 | 17 | 0.54645 |
| 55 | 0.05339 | 0.00136 | 0.31470 | 0.00959 | 0.04297 | 0.00084 | 0.01292 | 0.00032 | 345 | 36 | 278 | 7 | 271 | 5 | 259 | 6 | 0.65359 |
| 56 | 0.06503 | 0.00167 | 1.03623 | 0.03605 | 0.11593 | 0.00228 | 0.03321 | 0.00134 | 775 | 41 | 722 | 18 | 707 | 13 | 660 | 26 | 0.52910 |
| 57 | 0.05265 | 0.00231 | 0.35610 | 0.01344 | 0.04956 | 0.00131 | 0.01581 | 0.00068 | 314 | 42 | 309 | 10 | 312 | 8 | 317 | 14 | 0.56818 |
| 23JL33 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1 | 0.08285 | 0.00467 | 0.46269 | 0.02931 | 0.04029 | 0.00146 | 0.01716 | 0.00109 | 417 | 341 | 263 | 35 | 246 | 9 | 243 | 8 | 0.59524 |
| 2 | 0.07892 | 0.00841 | 0.79879 | 0.07439 | 0.07452 | 0.00274 | 0.03875 | 0.00312 | 426 | 339 | 447 | 53 | 450 | 16 | 451 | 20 | 0.27322 |
| 3 | 0.12921 | 0.01281 | 0.77332 | 0.07191 | 0.04462 | 0.00195 | 0.03854 | 0.00398 | 263 | 476 | 256 | 59 | 255 | 11 | 255 | 48 | 0.33784 |
| 4 | 0.06149 | 0.00663 | 0.63765 | 0.07646 | 0.07679 | 0.00398 | 0.02007 | 0.00195 | 656 | 170 | 501 | 47 | 477 | 24 | 402 | 39 | 0.65789 |
| 5 | 0.06957 | 0.00602 | 0.36793 | 0.03050 | 0.03870 | 0.00106 | 0.01427 | 0.00095 | 265 | 318 | 242 | 33 | 239 | 7 | 239 | 8 | 0.75188 |
| 6 | 0.07666 | 0.00572 | 0.54059 | 0.04221 | 0.05078 | 0.00115 | 0.02098 | 0.00131 | 329 | 311 | 312 | 38 | 310 | 7 | 309 | 9 | 0.58140 |
| 7 | 0.05297 | 0.00174 | 0.28107 | 0.01099 | 0.03843 | 0.00080 | 0.01174 | 0.00048 | 328 | 52 | 252 | 9 | 243 | 5 | 236 | 10 | 0.49505 |
| 8 | 0.05360 | 0.00221 | 0.30694 | 0.01428 | 0.04156 | 0.00119 | 0.01289 | 0.00098 | 354 | 56 | 272 | 11 | 263 | 7 | 259 | 20 | 0.47393 |
| 9 | 0.05093 | 0.00176 | 0.34664 | 0.01762 | 0.04889 | 0.00133 | 0.01395 | 0.00073 | 238 | 68 | 302 | 13 | 308 | 8 | 280 | 15 | 0.48309 |
| 10 | 0.06285 | 0.00460 | 0.37359 | 0.02674 | 0.04296 | 0.00125 | 0.01624 | 0.00067 |  | 210 | 240 | 21 | 265 | 7 | 273 | 11 | 0.72993 |
| 11 | 0.06213 | 0.00265 | 0.33697 | 0.01428 | 0.03920 | 0.00096 | 0.01321 | 0.00041 | 443 | 191 | 265 | 19 | 246 | 6 | 243 | 5 | 0.62112 |
| 12 | 0.06568 | 0.00510 | 0.41434 | 0.03117 | 0.04560 | 0.00143 | 0.01686 | 0.00081 | 226 | 278 | 276 | 31 | 282 | 9 | 283 | 8 | 0.66225 |
| 13 | 0.07484 | 0.00379 | 0.52179 | 0.02586 | 0.05041 | 0.00133 | 0.02218 | 0.00079 | 54 | 211 | 279 | 22 | 306 | 8 | 310 | 11 | 0.54945 |
| 14 | 0.06054 | 0.00247 | 0.69462 | 0.02825 | 0.08299 | 0.00200 | 0.02422 | 0.00071 | 623 | 48 | 536 | 17 | 514 | 12 | 484 | 14 | 0.77519 |
| 15 | 0.07081 | 0.00421 | 0.39649 | 0.02288 | 0.04051 | 0.00113 | 0.01701 | 0.00072 | 199 | 239 | 245 | 22 | 249 | 7 | 250 | 7 | 0.48780 |
| 16 | 0.06347 | 0.00423 | 0.39703 | 0.02568 | 0.04529 | 0.00128 | 0.01548 | 0.00061 | 345 | 282 | 289 | 30 | 282 | 8 | 281 | 6 | 0.81967 |
| 17 | 0.05871 | 0.00291 | 0.36834 | 0.01788 | 0.04544 | 0.00113 | 0.01559 | 0.00071 | 423 | 161 | 301 | 17 | 285 | 7 | 283 | 6 | 0.28653 |
| 18 | 0.06261 | 0.00272 | 0.66289 | 0.02838 | 0.07671 | 0.00184 | 0.02291 | 0.00072 | 695 | 52 | 516 | 17 | 476 | 11 | 458 | 14 | 0.67114 |
| 19 | 0.07640 | 0.00355 | 0.46328 | 0.02091 | 0.04394 | 0.00110 | 0.01774 | 0.00058 | 348 | 232 | 278 | 24 | 269 | 7 | 268 | 6 | 0.60976 |
| 20 | 0.06313 | 0.00213 | 1.01139 | 0.03397 | 0.11614 | 0.00262 | 0.03728 | 0.00099 | 713 | 36 | 710 | 17 | 708 | 15 | 740 | 19 | 0.60241 |
| 21 | 0.07116 | 0.00312 | 0.40811 | 0.01743 | 0.04159 | 0.00100 | 0.01495 | 0.00042 | 254 | 249 | 256 | 24 | 256 | 7 | 256 | 5 | 0.99010 |
| 22 | 0.05613 | 0.00237 | 0.34503 | 0.01425 | 0.04460 | 0.00103 | 0.01418 | 0.00037 | 458 | 52 | 301 | 11 | 281 | 6 | 285 | 7 | 1.02041 |
| 23 | 0.06131 | 0.00233 | 0.83427 | 0.03114 | 0.09874 | 0.00225 | 0.03029 | 0.00096 | 650 | 43 | 616 | 17 | 607 | 13 | 603 | 19 | 0.43103 |
| 24 | 0.06396 | 0.00448 | 0.33896 | 0.02291 | 0.03846 | 0.00110 | 0.01389 | 0.00053 |  | 241 | 217 | 23 | 238 | 7 | 241 | 9 | 0.95238 |
| 25 | 0.05571 | 0.00459 | 0.34579 | 0.02758 | 0.04508 | 0.00135 | 0.02340 | 0.00084 | 441 | 124 | 302 | 21 | 284 | 8 | 468 | 17 | 0.94340 |
| 26 | 0.06017 | 0.00251 | 0.68736 | 0.02788 | 0.08298 | 0.00190 | 0.02682 | 0.00094 | 610 | 49 | 531 | 17 | 514 | 11 | 535 | 19 | 0.37879 |
| 27 | 0.06013 | 0.00270 | 0.60373 | 0.02637 | 0.07294 | 0.00170 | 0.02269 | 0.00068 | 608 | 55 | 480 | 17 | 454 | 10 | 453 | 13 | 0.74627 |
| 28 | 0.05393 | 0.00228 | 0.35929 | 0.01480 | 0.04840 | 0.00109 | 0.01300 | 0.00041 | 368 | 53 | 312 | 11 | 305 | 7 | 261 | 8 | 0.58140 |
| 29 | 0.06265 | 0.00527 | 0.61553 | 0.04994 | 0.07139 | 0.00225 | 0.02250 | 0.00105 | 696 | 119 | 487 | 31 | 445 | 14 | 450 | 21 | 0.95238 |
| 30 | 0.05462 | 0.00301 | 0.28124 | 0.01502 | 0.03742 | 0.00091 | 0.01438 | 0.00047 | 397 | 76 | 252 | 12 | 237 | 6 | 289 | 9 | 0.69930 |
| 31 | 0.06208 | 0.00308 | 0.42093 | 0.02014 | 0.04928 | 0.00118 | 0.01640 | 0.00053 | 431 | 213 | 322 | 25 | 308 | 8 | 306 | 6 | 0.72464 |
| 32 | 0.11009 | 0.00264 | 4.81726 | 0.11357 | 0.31805 | 0.00656 | 0.08889 | 0.00179 | 1801 | 19 | 1788 | 20 | 1780 | 32 | 1721 | 33 | 1.92308 |

| **Supplementary Table 2 Major(wt%), REE and trace element (ppm) analyses for sandstone samples from the Wangqing area** | | | | | | | | | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | 23JL30-1 | 23JL30-2 | 23JL30-3 | 23JL33-1 | 23JL33-2 | 23JL33-3 | 23JL34-1 | 23JL34-2 | 23JL34-3 | 23JL36-1 | 23JL36-2 | 23JL36-3 | 23JL38-1 | 23JL38-2 | 23JL38-3 |
| SiO2 | 65.12 | 65.30 | 65.67 | 63.17 | 64.41 | 62.13 | 51.94 | 52.06 | 51.36 | 65.96 | 65.77 | 65.80 | 72.62 | 73.43 | 69.53 |
| Al2O3 | 17.27 | 17.31 | 17.38 | 17.55 | 17.27 | 18.63 | 16.08 | 16.21 | 16.42 | 17.13 | 17.16 | 17.12 | 12.79 | 13.69 | 14.96 |
| TFe2O3 | 5.17 | 5.15 | 5.09 | 6.35 | 6.53 | 7.61 | 10.15 | 9.98 | 10.17 | 5.19 | 5.20 | 5.21 | 4.22 | 2.48 | 3.99 |
| CaO | 0.50 | 0.50 | 0.50 | 1.16 | 0.38 | 0.31 | 7.50 | 7.22 | 7.06 | 1.42 | 1.42 | 1.41 | 2.10 | 1.39 | 1.07 |
| MgO | 1.29 | 1.27 | 1.28 | 1.74 | 1.73 | 1.92 | 5.17 | 5.17 | 5.14 | 1.43 | 1.44 | 1.42 | 0.91 | 0.60 | 0.99 |
| K2O | 3.60 | 3.61 | 3.60 | 3.11 | 3.12 | 3.67 | 1.12 | 1.10 | 1.25 | 2.82 | 2.83 | 2.83 | 1.71 | 2.71 | 3.12 |
| Na2O | 2.61 | 2.60 | 2.57 | 2.08 | 1.91 | 1.19 | 3.11 | 3.24 | 2.96 | 2.34 | 2.33 | 2.31 | 3.51 | 4.01 | 3.27 |
| TiO2 | 0.73 | 0.74 | 0.73 | 0.86 | 0.80 | 0.82 | 1.60 | 1.58 | 1.63 | 0.72 | 0.72 | 0.73 | 0.36 | 0.37 | 0.50 |
| P2O5 | 0.14 | 0.14 | 0.14 | 0.13 | 0.13 | 0.12 | 0.71 | 0.69 | 0.73 | 0.15 | 0.15 | 0.15 | 0.07 | 0.09 | 0.12 |
| MnO | 0.10 | 0.10 | 0.10 | 0.09 | 0.07 | 0.08 | 0.16 | 0.16 | 0.16 | 0.07 | 0.07 | 0.07 | 0.21 | 0.13 | 0.10 |
| LOI | 3.10 | 3.02 | 2.96 | 3.65 | 3.15 | 3.52 | 2.49 | 2.41 | 2.69 | 2.63 | 2.66 | 2.62 | 1.06 | 0.81 | 1.97 |
| Total | 99.63 | 99.74 | 100.02 | 99.89 | 99.50 | 100.00 | 100.03 | 99.82 | 99.58 | 99.87 | 99.75 | 99.69 | 99.56 | 99.70 | 99.62 |
| Ba | 446.4 | 406.7 | 416.6 | 452.4 | 517 | 619.8 | 426.1 | 301.6 | 324.9 | 446.8 | 446 | 391.9 | 300.2 | 632.6 | 640.2 |
| Rb | 59.01 | 44.92 | 56.45 | 35.15 | 38.02 | 35.28 | 19.53 | 9.29 | 12.82 | 18.66 | 32.22 | 34.94 | 54.68 | 76.44 | 62.06 |
| Sr | 68.11 | 62.25 | 66.99 | 131.5 | 131.6 | 88.3 | 805.4 | 668.2 | 754.6 | 142.8 | 151 | 154.3 | 251.6 | 260.2 | 156.1 |
| Zr | 206.1 | 209.8 | 204.5 | 224.6 | 127.4 | 147.2 | 137.8 | 133.4 | 135.4 | 132.4 | 127 | 129.1 | 67.81 | 108 | 126.2 |
| Nb | 14.29 | 14.68 | 14.63 | 14.47 | 8.457 | 9.532 | 7.252 | 7.054 | 7.215 | 3.908 | 3.709 | 3.783 | 3.133 | 4.894 | 7.113 |
| Ni | 21.7 | 22.44 | 68.54 | 51.25 | 47.37 | 47.25 | 53.35 | 49.91 | 50.56 | 24.65 | 16.27 | 14.18 | 37.05 | 17.25 | 22.72 |
| Co | 6.043 | 5.999 | 6.641 | 13.75 | 15.14 | 16.93 | 28.87 | 27.87 | 28.04 | 6.714 | 6.762 | 6.207 | 7.391 | 5.698 | 8.457 |
| Zn | 47.84 | 48.17 | 47.02 | 70.58 | 68.41 | 80.35 | 78.58 | 81.91 | 79.38 | 66.95 | 71.2 | 65.88 | 39.75 | 31.2 | 43.73 |
| Cr | 54.08 | 54.81 | 121.4 | 87.3 | 88.91 | 69.68 | 145.2 | 139.1 | 147.6 | 42.35 | 36.51 | 24.62 | 41.15 | 40.01 | 50.64 |
| La | 22.73 | 18.61 | 19.87 | 22.17 | 18.41 | 19 | 28.76 | 25.49 | 26.92 | 11.15 | 13.41 | 13.18 | 10.83 | 20.19 | 24.3 |
| Ce | 44.54 | 39.27 | 41.23 | 47.18 | 43.64 | 47.55 | 71.94 | 63.34 | 66.51 | 28.3 | 34.03 | 31.56 | 27.92 | 49.71 | 52.8 |
| Pr | 6.104 | 5.284 | 5.425 | 6.411 | 5.544 | 6.087 | 8.753 | 8.213 | 8.445 | 3.908 | 4.423 | 4.194 | 2.616 | 4.919 | 6.447 |
| Nd | 24.81 | 21.33 | 22.28 | 27.85 | 23.04 | 25.57 | 39.57 | 36.87 | 37.98 | 17.5 | 20.29 | 19.19 | 10.77 | 20.08 | 26.45 |
| Sm | 4.886 | 4.305 | 4.392 | 6.065 | 5.275 | 5.975 | 8.305 | 7.795 | 7.909 | 4.745 | 5.392 | 5.085 | 2.68 | 4.733 | 5.922 |
| Eu | 0.916 | 0.843 | 0.8376 | 1.171 | 1.206 | 1.236 | 2.536 | 2.336 | 2.337 | 1.098 | 1.171 | 1.102 | 0.4512 | 0.7715 | 1.239 |
| Gd | 4.599 | 4.056 | 4.148 | 6.267 | 5.447 | 6.171 | 7.857 | 7.47 | 7.643 | 5.477 | 5.97 | 5.658 | 3.052 | 5.243 | 6.001 |
| Tb | 0.6441 | 0.5843 | 0.5776 | 0.869 | 0.8497 | 0.9018 | 0.97 | 0.9356 | 0.9508 | 0.8909 | 0.9043 | 0.8541 | 0.4746 | 0.8221 | 0.886 |
| Dy | 4.176 | 3.771 | 3.699 | 5.51 | 5.282 | 5.844 | 5.624 | 5.292 | 5.526 | 5.946 | 6.112 | 5.658 | 3.322 | 5.16 | 5.882 |
| Ho | 0.8743 | 0.7714 | 0.7697 | 1.133 | 1.112 | 1.175 | 1.04 | 0.9837 | 1.03 | 1.251 | 1.273 | 1.163 | 0.7022 | 1.111 | 1.183 |
| Er | 2.745 | 2.481 | 2.439 | 3.514 | 3.287 | 3.594 | 2.972 | 2.879 | 2.899 | 3.875 | 4.031 | 3.64 | 2.362 | 3.45 | 3.658 |
| Tm | 0.4231 | 0.3645 | 0.3666 | 0.5169 | 0.5225 | 0.548 | 0.3977 | 0.3767 | 0.397 | 0.5834 | 0.5721 | 0.5452 | 0.3605 | 0.5635 | 0.5198 |
| Yb | 3.011 | 2.748 | 2.674 | 3.785 | 3.371 | 3.846 | 2.632 | 2.499 | 2.545 | 4.207 | 4.125 | 3.862 | 2.581 | 3.654 | 3.64 |
| Lu | 0.4502 | 0.4058 | 0.391 | 0.5577 | 0.2331 | 0.2329 | 0.1665 | 0.1574 | 0.1582 | 0.2735 | 0.2691 | 0.2474 | 0.1684 | 0.2528 | 0.2298 |
| Y | 17.8 | 14.79 | 15.08 | 23.72 | 16.89 | 18.17 | 21.55 | 18.84 | 20.18 | 23.56 | 26.79 | 25.17 | 17.53 | 24.84 | 23.46 |
| Cs | 7.308 | 6.764 | 7.541 | 3.73 | 4.526 | 4.531 | 2.271 | 2.153 | 2.202 | 3.77 | 4.41 | 4.524 | 3.962 | 2.677 | 4.149 |
| Ta | 2.376 | 2.469 | 2.414 | 2.311 | 0.603 | 0.6962 | 0.3966 | 0.3973 | 0.3984 | 0.2985 | 0.2752 | 0.2787 | 0.2997 | 0.4301 | 0.5352 |
| Hf | 1055 | 1057 | 1052 | 1111 | 4.253 | 5.001 | 3.673 | 3.689 | 3.633 | 4.482 | 4.243 | 4.255 | 2.575 | 3.799 | 4.226 |
| Th | 21.18 | 18.11 | 18.49 | 19.74 | 4.638 | 4.976 | 5.949 | 6.299 | 6.871 | 23.2 | 23.93 | 22.33 | 1.056 | 0.9975 | 1.843 |
| U | 4.87 | 4.645 | 5.032 | 5.627 | 3.305 | 3.947 | 3.499 | 3.02 | 3.284 | 4.145 | 3.908 | 3.82 | 0.7567 | 0.742 | 0.3646 |
| Ga | 18.19 | 16.97 | 17.26 | 16.49 | 18.4 | 17.93 | 19.13 | 19.17 | 19.29 | 16.97 | 14.33 | 14.5 | 9.878 | 7.868 | 14.88 |

| **Supplementary Table 3 Lu-Hf isotopic data of zircons from the Permian-Triassic sedimentary rocks in the Yanbian area, NE China.** | | | | | | | | | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **t (Ma)** | **176Yb/177Hf** | **2σ** | **176Lu/177Hf** | **2σ** | **176Hf/177Hf** | **2σ** | **εHf(0)** | **εHf(t)** | **2σ** | **TDM1** | **TDM2(average)** | **fLu/Hf** | **TDM2(mafic)** | **TDM2(felsic)** |
| 23JL30-1 | 250 | 0.029232149 | 0.000304252 | 0.001088679 | 1.14278E-05 | 0.282563189 | 1.93335E-05 | -7.4 | -2.1 | 0.7 | 977 | 1407 | -0.97 | 1889 | 1181 |
| 2 | 249 | 0.041734494 | 0.000670656 | 0.001794852 | 2.66829E-05 | 0.282662796 | 2.80917E-05 | -3.9 | 1.3 | 1.0 | 852 | 1192 | -0.95 | 1584 | 1007 |
| 3 | 252 | 0.037692799 | 0.000642225 | 0.001499723 | 2.58503E-05 | 0.282837019 | 1.63702E-05 | 2.3 | 7.6 | 0.6 | 596 | 794 | -0.95 | 1019 | 688 |
| 4 | 245 | 0.067172319 | 0.001217064 | 0.002770333 | 5.56248E-05 | 0.282848974 | 2.34804E-05 | 2.7 | 7.7 | 0.8 | 599 | 784 | -0.92 | 1008 | 679 |
| 5 | 247 | 0.034960566 | 0.000158929 | 0.001327509 | 6.47399E-06 | 0.282763698 | 3.29199E-05 | -0.3 | 4.9 | 1.2 | 698 | 961 | -0.96 | 1257 | 821 |
| 6 | 244 | 0.029603565 | 0.000137172 | 0.001181142 | 5.45412E-06 | 0.282613162 | 2.61293E-05 | -5.6 | -0.4 | 0.9 | 909 | 1300 | -0.96 | 1739 | 1093 |
| 7 | 438 | 0.031918803 | 0.000784816 | 0.001237459 | 3.01847E-05 | 0.28247384 | 2.15981E-05 | -10.5 | -1.3 | 0.8 | 1107 | 1499 | -0.96 | 1941 | 1292 |
| 8 | 254 | 0.030617515 | 0.000287962 | 0.00122865 | 1.19232E-05 | 0.282557719 | 2.357E-05 | -7.6 | -2.2 | 0.8 | 988 | 1419 | -0.96 | 1903 | 1191 |
| 9 | 246 | 0.05132746 | 0.000330354 | 0.002121817 | 1.29083E-05 | 0.282755785 | 2.89661E-05 | -0.6 | 4.5 | 1.0 | 725 | 987 | -0.94 | 1295 | 842 |
| 10 | 242 | 0.031246854 | 6.89952E-05 | 0.001242262 | 3.13425E-06 | 0.282829958 | 2.99831E-05 | 2.0 | 7.2 | 1.1 | 602 | 813 | -0.96 | 1050 | 701 |
| 23JL33-1 | 246 | 0.054663136 | 0.000506721 | 0.002101708 | 1.82526E-05 | 0.282808772 | 2.38719E-05 | 1.3 | 6.4 | 0.8 | 647 | 867 | -0.94 | 1126 | 746 |
| 2 | 239 | 0.044959713 | 0.001565422 | 0.00178712 | 6.05001E-05 | 0.282790344 | 2.92856E-05 | 0.6 | 5.6 | 1.0 | 668 | 910 | -0.95 | 1189 | 779 |
| 23JL34-1 | 249 | 0.026826722 | 0.000225009 | 0.001093727 | 8.86026E-06 | 0.282637068 | 3.01848E-05 | -4.8 | 0.5 | 1.1 | 873 | 1242 | -0.97 | 1655 | 1048 |
| 2 | 280 | 0.012694741 | 0.000104063 | 0.00059521 | 5.18617E-06 | 0.282890181 | 3.6635E-05 | 4.2 | 10.2 | 1.3 | 507 | 647 | -0.98 | 799 | 575 |
| 3 | 271 | 0.039754164 | 0.000272501 | 0.001702625 | 1.24263E-05 | 0.282561072 | 4.2898E-05 | -7.5 | -1.8 | 1.5 | 996 | 1407 | -0.95 | 1879 | 1185 |
| 4 | 473 | 0.027410349 | 0.000177344 | 0.001012985 | 7.35106E-06 | 0.282314547 | 4.15757E-05 | -16.2 | -6.1 | 1.5 | 1324 | 1830 | -0.97 | 2395 | 1565 |
| 5 | 402 | 0.030333225 | 0.000240707 | 0.00124153 | 8.71783E-06 | 0.282439806 | 2.92714E-05 | -11.7 | -3.2 | 1.0 | 1155 | 1596 | -0.96 | 2093 | 1363 |
| 6 | 250 | 0.022581018 | 0.000197522 | 0.000904623 | 7.63153E-06 | 0.282512051 | 2.61702E-05 | -9.2 | -3.9 | 0.9 | 1044 | 1520 | -0.97 | 2049 | 1272 |
| 23JL36-1 | 269 | 0.058936889 | 0.000369765 | 0.002535042 | 1.47307E-05 | 0.282951146 | 2.43491E-05 | 6.3 | 11.8 | 0.9 | 444 | 538 | -0.92 | 649 | 485 |
| 2 | 266 | 0.027121086 | 0.000399772 | 0.001090949 | 1.60942E-05 | 0.282886665 | 3.24223E-05 | 4.1 | 9.7 | 1.1 | 519 | 669 | -0.97 | 837 | 590 |
| 3 | 258 | 0.055274974 | 0.000307121 | 0.002265498 | 1.32467E-05 | 0.282906913 | 2.25224E-05 | 4.8 | 10.1 | 0.8 | 506 | 641 | -0.93 | 800 | 566 |
| 4 | 249 | 0.027343356 | 0.000195264 | 0.001174401 | 8.78895E-06 | 0.282919302 | 2.38805E-05 | 5.2 | 10.5 | 0.8 | 474 | 606 | -0.96 | 754 | 536 |
| 5 | 263 | 0.047026518 | 0.00048117 | 0.001856717 | 1.78976E-05 | 0.28290313 | 2.94312E-05 | 4.6 | 10.1 | 1.0 | 506 | 642 | -0.94 | 800 | 568 |
| 6 | 264 | 0.022422158 | 0.000151634 | 0.000935185 | 6.73532E-06 | 0.282920099 | 3.1342E-05 | 5.2 | 10.9 | 1.1 | 470 | 593 | -0.97 | 729 | 528 |
| 7 | 326 | 0.049824207 | 0.000122851 | 0.001956297 | 5.21047E-06 | 0.282644891 | 2.14519E-05 | -4.5 | 2.3 | 0.8 | 882 | 1191 | -0.94 | 1550 | 1022 |
| 8 | 251 | 0.037439852 | 0.000213664 | 0.001515424 | 8.29552E-06 | 0.282946969 | 1.74539E-05 | 6.2 | 11.5 | 0.6 | 438 | 546 | -0.95 | 668 | 488 |
| 9 | 260 | 0.046978177 | 0.000410129 | 0.001830252 | 1.57285E-05 | 0.2829695 | 2.4276E-05 | 7.0 | 12.4 | 0.9 | 409 | 493 | -0.94 | 590 | 447 |
| 10 | 250 | 0.046062924 | 0.000557342 | 0.001949194 | 1.91292E-05 | 0.282920946 | 2.80054E-05 | 5.3 | 10.4 | 1.0 | 481 | 610 | -0.94 | 760 | 540 |
| 11 | 247 | 0.026489363 | 0.00012269 | 0.001126128 | 4.62413E-06 | 0.282924074 | 2.24392E-05 | 5.4 | 10.6 | 0.8 | 466 | 596 | -0.97 | 741 | 528 |
| 12 | 264 | 0.046244648 | 0.000398376 | 0.00198958 | 1.53929E-05 | 0.282929887 | 2.95148E-05 | 5.6 | 11.0 | 1.0 | 469 | 582 | -0.94 | 715 | 520 |
| 13 | 272 | 0.024227054 | 0.000156824 | 0.00101793 | 6.7176E-06 | 0.282959507 | 1.72621E-05 | 6.6 | 12.4 | 0.6 | 415 | 499 | -0.97 | 594 | 455 |
| 23JL38-1 | 260 | 0.033762751 | 0.00029943 | 0.001366284 | 1.3081E-05 | 0.282701645 | 2.07206E-05 | -2.5 | 3.0 | 0.7 | 787 | 1093 | -0.96 | 1440 | 930 |
| 2 | 263 | 0.052467128 | 0.000164855 | 0.00215833 | 5.90759E-06 | 0.282822352 | 2.20021E-05 | 1.8 | 7.2 | 0.8 | 628 | 828 | -0.93 | 1063 | 718 |
| 3 | 257 | 0.054445313 | 0.000242452 | 0.002173718 | 6.99766E-06 | 0.282847312 | 1.82028E-05 | 2.7 | 7.9 | 0.6 | 592 | 775 | -0.93 | 991 | 674 |
| 4 | 251 | 0.055830151 | 0.000961299 | 0.002234891 | 3.33712E-05 | 0.282880372 | 1.65855E-05 | 3.8 | 9.0 | 0.6 | 545 | 704 | -0.93 | 893 | 616 |
| 5 | 495 | 0.020043406 | 0.000363007 | 0.000885148 | 1.51443E-05 | 0.282475245 | 2.14263E-05 | -10.5 | 0.1 | 0.8 | 1095 | 1455 | -0.97 | 1855 | 1268 |
| 6 | 277 | 0.036326031 | 0.000119765 | 0.001377096 | 5.18595E-06 | 0.282533033 | 1.39857E-05 | -8.5 | -2.6 | 0.5 | 1027 | 1462 | -0.96 | 1956 | 1231 |
| 7 | 272 | 0.068732654 | 0.001807507 | 0.002987641 | 7.74106E-05 | 0.282797167 | 2.20664E-05 | 0.9 | 6.3 | 0.8 | 681 | 889 | -0.91 | 1146 | 769 |
| 8 | 254 | 0.046664139 | 0.000370508 | 0.001865851 | 1.35237E-05 | 0.282774669 | 2.84093E-05 | 0.1 | 5.4 | 1.0 | 692 | 937 | -0.94 | 1222 | 804 |
| 9 | 271 | 0.023127071 | 3.17999E-05 | 0.000912897 | 1.56431E-06 | 0.282667708 | 1.5576E-05 | -3.7 | 2.1 | 0.6 | 826 | 1158 | -0.97 | 1527 | 985 |