|  |  |
| --- | --- |
| Table S4. Percent contribution of elliptic Fourier coefficients (variables) per principal component (factor) |  |
|  |  |  |  |  |  |  |  |  |  |  |
|   | F1 | F2 | F3 | F4 | F5 | F6 | F7 | F8 | F9 | F10 |
| Var1 | 9.700 | 40.238 | 0.113 | 1.107 | 7.967 | 16.189 | 1.138 | 0.139 | 0.007 | 0.084 |
| Var2 | 0.212 | 13.287 | 7.262 | 7.418 | 15.947 | 10.575 | 0.504 | 2.839 | 19.655 | 0.346 |
| Var3 | 0.368 | 5.922 | 76.807 | 2.390 | 3.391 | 4.472 | 0.007 | 0.138 | 0.467 | 1.573 |
| Var4 | 56.084 | 16.773 | 0.016 | 12.644 | 4.304 | 8.025 | 0.065 | 0.005 | 0.016 | 0.107 |
| Var5 | 10.828 | 1.733 | 0.005 | 19.049 | 30.176 | 1.516 | 3.058 | 0.530 | 0.499 | 0.817 |
| Var6 | 0.037 | 4.456 | 1.344 | 3.507 | 2.794 | 2.953 | 0.013 | 15.105 | 43.800 | 2.347 |
| Var7 | 0.035 | 0.533 | 0.047 | 0.669 | 0.179 | 0.199 | 0.191 | 50.725 | 24.782 | 1.175 |
| Var8 | 0.235 | 6.476 | 0.042 | 26.385 | 17.107 | 34.517 | 0.114 | 0.060 | 0.221 | 9.645 |
| Var9 | 8.141 | 2.978 | 0.074 | 0.373 | 1.810 | 6.073 | 3.021 | 0.027 | 0.031 | 1.239 |
| Var10 | 0.076 | 3.499 | 7.972 | 1.952 | 2.341 | 1.690 | 0.014 | 0.290 | 0.000 | 1.349 |
| Var11 | 0.032 | 0.406 | 0.176 | 0.150 | 0.722 | 0.511 | 1.110 | 0.732 | 0.131 | 0.014 |
| Var12 | 0.069 | 0.100 | 0.008 | 0.159 | 3.101 | 0.270 | 67.484 | 0.296 | 0.095 | 2.632 |
| Var13 | 5.060 | 0.600 | 0.000 | 10.587 | 3.884 | 0.128 | 0.229 | 0.153 | 0.067 | 0.138 |
| Var14 | 0.005 | 0.656 | 0.319 | 0.428 | 0.224 | 0.857 | 0.058 | 10.929 | 2.891 | 2.611 |
| Var15 | 0.005 | 0.045 | 0.000 | 0.046 | 0.020 | 0.331 | 0.121 | 1.770 | 1.548 | 0.024 |
| Var16 | 0.500 | 0.070 | 0.145 | 0.954 | 2.287 | 4.185 | 0.174 | 0.747 | 1.091 | 35.411 |
| Var17 | 3.002 | 0.487 | 0.007 | 0.872 | 0.149 | 1.327 | 7.856 | 0.038 | 0.503 | 0.335 |
| Var18 | 0.011 | 0.222 | 2.765 | 0.411 | 0.741 | 1.091 | 0.006 | 0.147 | 0.433 | 3.171 |
| Var19 | 0.001 | 0.000 | 0.152 | 0.020 | 0.205 | 0.354 | 0.140 | 0.311 | 0.072 | 0.314 |
| Var20 | 0.798 | 0.001 | 0.001 | 0.468 | 0.274 | 0.532 | 3.922 | 0.040 | 0.003 | 1.529 |
| Var21 | 1.678 | 0.396 | 0.013 | 5.271 | 0.229 | 0.002 | 0.052 | 0.549 | 0.658 | 7.464 |
| Var22 | 0.000 | 0.016 | 0.175 | 0.083 | 0.191 | 0.881 | 0.009 | 6.998 | 0.262 | 1.383 |
| Var23 | 0.003 | 0.111 | 0.000 | 0.003 | 0.025 | 0.302 | 0.053 | 0.135 | 0.332 | 0.084 |
| Var24 | 0.667 | 0.025 | 0.013 | 0.445 | 0.491 | 0.824 | 0.137 | 0.261 | 0.501 | 8.154 |
| Var25 | 0.893 | 0.159 | 0.010 | 0.231 | 0.001 | 0.087 | 4.919 | 0.000 | 0.007 | 0.320 |
| Var26 | 0.002 | 0.006 | 1.084 | 0.019 | 0.450 | 0.443 | 0.081 | 0.032 | 0.125 | 1.056 |
| Var27 | 0.004 | 0.004 | 0.165 | 0.008 | 0.058 | 0.052 | 0.057 | 0.053 | 0.007 | 0.120 |
| Var28 | 0.454 | 0.014 | 0.000 | 0.000 | 0.209 | 0.125 | 0.023 | 0.047 | 0.003 | 0.264 |
| Var29 | 0.435 | 0.125 | 0.027 | 1.819 | 0.035 | 0.097 | 0.073 | 0.158 | 0.027 | 5.385 |
| Var30 | 0.002 | 0.027 | 0.086 | 0.010 | 0.035 | 0.506 | 0.010 | 3.091 | 0.010 | 0.608 |
| Var31 | 0.002 | 0.013 | 0.002 | 0.000 | 0.007 | 0.003 | 0.001 | 0.311 | 0.083 | 0.027 |
| Var32 | 0.155 | 0.004 | 0.000 | 0.902 | 0.081 | 0.060 | 0.069 | 0.002 | 0.066 | 0.173 |
| Var33 | 0.182 | 0.199 | 0.013 | 0.030 | 0.000 | 0.002 | 2.493 | 0.013 | 0.018 | 0.439 |
| Var34 | 0.002 | 0.042 | 0.434 | 0.017 | 0.027 | 0.017 | 0.000 | 0.013 | 0.032 | 0.398 |
| Var35 | 0.000 | 0.002 | 0.235 | 0.000 | 0.000 | 0.001 | 0.006 | 0.080 | 0.127 | 0.186 |
| Var36 | 0.082 | 0.029 | 0.002 | 0.000 | 0.090 | 0.019 | 0.245 | 0.108 | 0.008 | 0.014 |
| Var37 | 0.093 | 0.013 | 0.023 | 0.794 | 0.061 | 0.008 | 0.086 | 0.139 | 0.061 | 4.041 |
| Var38 | 0.000 | 0.007 | 0.037 | 0.004 | 0.004 | 0.159 | 0.002 | 1.055 | 0.185 | 0.069 |
| Var39 | 0.002 | 0.005 | 0.023 | 0.009 | 0.000 | 0.002 | 0.019 | 0.401 | 0.008 | 0.011 |
| Var40 | 0.047 | 0.000 | 0.000 | 0.442 | 0.033 | 0.028 | 0.002 | 0.024 | 0.017 | 0.328 |
| Var41 | 0.040 | 0.167 | 0.007 | 0.003 | 0.003 | 0.074 | 0.905 | 0.060 | 0.032 | 0.080 |
| Var42 | 0.000 | 0.002 | 0.107 | 0.000 | 0.027 | 0.016 | 0.008 | 0.058 | 0.000 | 0.018 |
| Var43 | 0.001 | 0.035 | 0.067 | 0.001 | 0.002 | 0.002 | 0.000 | 0.003 | 0.006 | 0.024 |
| Var44 | 0.013 | 0.013 | 0.005 | 0.006 | 0.001 | 0.033 | 0.563 | 0.004 | 0.002 | 0.025 |
| Var45 | 0.012 | 0.000 | 0.014 | 0.153 | 0.007 | 0.022 | 0.008 | 0.060 | 0.025 | 1.963 |
| Var46 | 0.001 | 0.023 | 0.020 | 0.008 | 0.002 | 0.074 | 0.006 | 0.373 | 0.199 | 0.021 |
| Var47 | 0.000 | 0.007 | 0.007 | 0.001 | 0.001 | 0.003 | 0.005 | 0.286 | 0.019 | 0.002 |
| Var48 | 0.018 | 0.001 | 0.005 | 0.071 | 0.009 | 0.076 | 0.045 | 0.081 | 0.038 | 0.224 |
| Var49 | 0.001 | 0.005 | 0.001 | 0.001 | 0.062 | 0.014 | 0.296 | 0.000 | 0.001 | 0.057 |
| Var50 | 0.000 | 0.015 | 0.032 | 0.006 | 0.003 | 0.029 | 0.033 | 0.063 | 0.000 | 0.009 |
| Var51 | 0.000 | 0.001 | 0.031 | 0.001 | 0.008 | 0.000 | 0.005 | 0.004 | 0.000 | 0.022 |
| Var52 | 0.000 | 0.000 | 0.005 | 0.000 | 0.109 | 0.001 | 0.237 | 0.008 | 0.002 | 0.007 |
| Var53 | 0.004 | 0.012 | 0.012 | 0.012 | 0.003 | 0.046 | 0.001 | 0.003 | 0.159 | 0.885 |
| Var54 | 0.000 | 0.001 | 0.010 | 0.004 | 0.003 | 0.016 | 0.008 | 0.089 | 0.157 | 0.016 |
| Var55 | 0.001 | 0.001 | 0.009 | 0.007 | 0.008 | 0.013 | 0.000 | 0.049 | 0.080 | 0.000 |
| Var56 | 0.001 | 0.001 | 0.001 | 0.018 | 0.007 | 0.016 | 0.004 | 0.005 | 0.130 | 0.416 |
| Var57 | 0.000 | 0.000 | 0.000 | 0.001 | 0.021 | 0.000 | 0.082 | 0.000 | 0.020 | 0.004 |
| Var58 | 0.001 | 0.005 | 0.011 | 0.000 | 0.000 | 0.027 | 0.019 | 0.031 | 0.006 | 0.000 |
| Var59 | 0.000 | 0.007 | 0.001 | 0.002 | 0.000 | 0.003 | 0.005 | 0.050 | 0.019 | 0.015 |
| Var60 | 0.002 | 0.003 | 0.005 | 0.000 | 0.030 | 0.006 | 0.107 | 0.023 | 0.013 | 0.001 |
| Var61 | 0.001 | 0.000 | 0.007 | 0.007 | 0.004 | 0.034 | 0.010 | 0.038 | 0.053 | 0.357 |
| Var62 | 0.000 | 0.003 | 0.006 | 0.001 | 0.000 | 0.010 | 0.002 | 0.031 | 0.083 | 0.003 |
| Var63 | 0.000 | 0.000 | 0.001 | 0.000 | 0.002 | 0.005 | 0.001 | 0.009 | 0.006 | 0.000 |
| Var64 | 0.000 | 0.000 | 0.002 | 0.000 | 0.001 | 0.011 | 0.000 | 0.000 | 0.003 | 0.303 |
| Var65 | 0.000 | 0.007 | 0.003 | 0.001 | 0.005 | 0.004 | 0.023 | 0.001 | 0.000 | 0.004 |
| Var66 | 0.000 | 0.000 | 0.008 | 0.001 | 0.006 | 0.000 | 0.000 | 0.038 | 0.023 | 0.004 |
| Var67 | 0.000 | 0.000 | 0.001 | 0.000 | 0.003 | 0.006 | 0.000 | 0.003 | 0.006 | 0.006 |
| Var68 | 0.000 | 0.000 | 0.003 | 0.000 | 0.010 | 0.008 | 0.005 | 0.004 | 0.002 | 0.001 |
| Var69 | 0.000 | 0.001 | 0.002 | 0.006 | 0.006 | 0.013 | 0.029 | 0.025 | 0.016 | 0.118 |
| Var70 | 0.000 | 0.000 | 0.009 | 0.001 | 0.001 | 0.012 | 0.001 | 0.031 | 0.002 | 0.001 |
| Var71 | 0.000 | 0.000 | 0.000 | 0.001 | 0.003 | 0.002 | 0.005 | 0.026 | 0.018 | 0.000 |
| Var72 | 0.000 | 0.002 | 0.000 | 0.000 | 0.003 | 0.000 | 0.001 | 0.001 | 0.000 | 0.008 |
| Var73 | 0.000 | 0.000 | 0.004 | 0.002 | 0.000 | 0.003 | 0.022 | 0.002 | 0.001 | 0.001 |
| Var74 | 0.000 | 0.003 | 0.005 | 0.002 | 0.001 | 0.001 | 0.000 | 0.014 | 0.008 | 0.011 |
| Var75 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.002 | 0.000 | 0.037 | 0.019 | 0.005 |
| Var76 | 0.000 | 0.001 | 0.000 | 0.000 | 0.001 | 0.004 | 0.000 | 0.000 | 0.000 | 0.007 |