

Linear trends of anticyclonic wave breaking (type +1) and cyclonic wave breaking (-1) in 1981-2015.

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| Potential_T (kPV (PVU)) | RWB_type | annual_b1 | annual_std | summer_b | summer_std | winter_b1 | winter_std |        |
|-------------------------|----------|-----------|------------|----------|------------|-----------|------------|--------|
| 320                     | 2        | -1        | -0.0826    | 0.1476   | -0.0784    | 0.0408    | -0.0031    | 0.0698 |
| 330                     | 2        | -1        | 0.4146     | 0.0794   | 0.1594     | 0.0681    | 0.0039     | 0.0219 |
| 340                     | 2        | -1        | 0.0625     | 0.0527   | 0.0723     | 0.0373    | -0.0084    | 0.011  |
| 350                     | 2        | -1        | 0.0389     | 0.0363   | 0.0275     | 0.0221    | 0.0056     | 0.0085 |
| 360                     | 2        | -1        | -0.0448    | 0.0611   | -0.0972    | 0.0344    | 0.0022     | 0.0156 |
| 370                     | 2        | -1        | 0.1185     | 0.0829   | 0.0277     | 0.0273    | -0.005     | 0.035  |
| 380                     | 2        | -1        | 0.0249     | 0.0398   | -0.0073    | 0.0222    | 0.0118     | 0.0221 |
| 320                     | 3        | -1        | -0.3048    | 0.16     | -0.1485    | 0.0417    | -0.0532    | 0.0829 |
| 330                     | 3        | -1        | 0.3387     | 0.1063   | 0.2098     | 0.0921    | -0.0168    | 0.0343 |
| 340                     | 3        | -1        | 0.2599     | 0.0623   | 0.151      | 0.0413    | -0.0034    | 0.0166 |
| 350                     | 3        | -1        | 0.0521     | 0.037    | 0.0431     | 0.0296    | 0.0101     | 0.0058 |
| 360                     | 3        | -1        | 0.0669     | 0.0378   | 0.0431     | 0.0249    | -0.0109    | 0.0044 |
| 370                     | 3        | -1        | 0.1479     | 0.0561   | 0.1317     | 0.0488    | -0.0202    | 0.0138 |
| 380                     | 3        | -1        | 0.1151     | 0.0534   | 0.0132     | 0.0289    | 0.0056     | 0.0353 |
| 320                     | 4        | -1        | -0.2843    | 0.1424   | -0.13      | 0.0374    | 0.0454     | 0.0838 |
| 330                     | 4        | -1        | 0.2387     | 0.1537   | 0.1137     | 0.0761    | -0.0168    | 0.0509 |
| 340                     | 4        | -1        | 0.1608     | 0.0668   | 0.1171     | 0.0428    | 0.0076     | 0.0175 |
| 350                     | 4        | -1        | 0.0978     | 0.0464   | 0.0529     | 0.0348    | 0.0196     | 0.0113 |
| 360                     | 4        | -1        | 0.063      | 0.0329   | 0.035      | 0.028     | -0.0036    | 0.0117 |
| 370                     | 4        | -1        | -0.0008    | 0.051    | 0.012      | 0.0325    | -0.0137    | 0.0149 |
| 380                     | 4        | -1        | 0.1874     | 0.0765   | 0.1611     | 0.057     | 0.0336     | 0.0226 |
| 320                     | 5        | -1        | -0.2006    | 0.1483   | -0.0594    | 0.0376    | -0.0465    | 0.0698 |
| 330                     | 5        | -1        | 0.1451     | 0.1426   | -0.0162    | 0.0746    | -0.0087    | 0.0696 |
| 340                     | 5        | -1        | 0.4521     | 0.0924   | 0.2067     | 0.0499    | 0.0333     | 0.023  |
| 350                     | 5        | -1        | 0.1067     | 0.0595   | 0.0448     | 0.0391    | 0.0104     | 0.014  |
| 360                     | 5        | -1        | 0.0692     | 0.0462   | 0.0574     | 0.0333    | 0.0216     | 0.0127 |
| 370                     | 5        | -1        | 0.0451     | 0.0506   | 0.0258     | 0.0321    | 0.0017     | 0.0254 |
| 380                     | 5        | -1        | 0.0328     | 0.0646   | 0.0583     | 0.0326    | -0.0188    | 0.0252 |
| 320                     | 6        | -1        | -0.012     | 0.1382   | -0.0487    | 0.0321    | -0.0081    | 0.0682 |
| 330                     | 6        | -1        | -0.1417    | 0.173    | -0.1246    | 0.095     | 0.0448     | 0.0574 |
| 340                     | 6        | -1        | 0.3381     | 0.1181   | 0.1143     | 0.0749    | -0.0188    | 0.0437 |
| 350                     | 6        | -1        | 0.1529     | 0.0843   | 0.0706     | 0.0588    | -0.0025    | 0.0274 |
| 360                     | 6        | -1        | -0.0134    | 0.0762   | 0.0053     | 0.0424    | 0.0146     | 0.0275 |
| 370                     | 6        | -1        | 0.0773     | 0.0641   | 0.0683     | 0.0426    | -0.0006    | 0.0398 |
| 380                     | 6        | -1        | -0.0647    | 0.0774   | -0.0297    | 0.0457    | -0.028     | 0.0298 |

| Potential_IPV (PVU) | RWB_type | annual_b1 | annual_std | summer_b1 | summer_std | winter_b1 | winter_std |        |
|---------------------|----------|-----------|------------|-----------|------------|-----------|------------|--------|
| 320                 | 2        | 1         | -0.4857    | 0.2165    | -0.2022    | 0.059     | -0.0092    | 0.0884 |
| 330                 | 2        | 1         | 0.2888     | 0.2301    | 0.0235     | 0.0853    | 0.0261     | 0.1049 |
| 340                 | 2        | 1         | 0.6062     | 0.176     | 0.1123     | 0.0859    | 0.207      | 0.1036 |
| 350                 | 2        | 1         | -0.0857    | 0.1753    | -0.0165    | 0.0914    | 0.1025     | 0.0944 |
| 360                 | 2        | 1         | 0.0843     | 0.1819    | 0.0924     | 0.0951    | 0.1067     | 0.1086 |
| 370                 | 2        | 1         | -0.0031    | 0.3179    | 0.1569     | 0.0923    | -0.1664    | 0.1923 |
| 380                 | 2        | 1         | 0.3042     | 0.2355    | 0.0014     | 0.0379    | 0.1557     | 0.1137 |
| 320                 | 3        | 1         | -0.5423    | 0.2042    | -0.2168    | 0.0606    | -0.0958    | 0.0899 |
| 330                 | 3        | 1         | 0.0821     | 0.2205    | -0.1087    | 0.1053    | -0.0613    | 0.1015 |
| 340                 | 3        | 1         | 0.5333     | 0.2338    | 0.123      | 0.0868    | 0.1535     | 0.1217 |
| 350                 | 3        | 1         | 0.4527     | 0.176     | 0.1667     | 0.0775    | 0.1964     | 0.1256 |
| 360                 | 3        | 1         | 0.0039     | 0.1873    | 0.063      | 0.0987    | 0.0961     | 0.1083 |
| 370                 | 3        | 1         | 0.1588     | 0.2089    | 0.1325     | 0.1021    | -0.0084    | 0.1089 |
| 380                 | 3        | 1         | 0.3978     | 0.2103    | 0.1812     | 0.0979    | -0.0132    | 0.1562 |
| 320                 | 4        | 1         | -0.3543    | 0.1698    | -0.1597    | 0.0573    | -0.0549    | 0.0754 |
| 330                 | 4        | 1         | -0.2714    | 0.1959    | -0.1737    | 0.0832    | -0.0619    | 0.096  |
| 340                 | 4        | 1         | 0.2647     | 0.2628    | 0.1249     | 0.092     | 0.0286     | 0.1328 |
| 350                 | 4        | 1         | 0.7375     | 0.1879    | 0.1238     | 0.0876    | 0.1546     | 0.1316 |
| 360                 | 4        | 1         | -0.1569    | 0.1664    | -0.037     | 0.0664    | 0.1017     | 0.1142 |
| 370                 | 4        | 1         | -0.181     | 0.1629    | 0.0947     | 0.0953    | -0.0204    | 0.102  |
| 380                 | 4        | 1         | 0.2356     | 0.2212    | 0.1599     | 0.1184    | -0.0342    | 0.138  |
| 320                 | 5        | 1         | -0.2493    | 0.2329    | -0.0955    | 0.046     | 0.0289     | 0.1024 |
| 330                 | 5        | 1         | -0.0146    | 0.2024    | 0.005      | 0.111     | 0.009      | 0.0945 |
| 340                 | 5        | 1         | 0.2118     | 0.2491    | -0.1297    | 0.0848    | 0.1148     | 0.1317 |
| 350                 | 5        | 1         | 0.6711     | 0.2584    | 0.1824     | 0.089     | 0.0185     | 0.1339 |
| 360                 | 5        | 1         | 0.2563     | 0.2319    | -0.0675    | 0.0985    | 0.0986     | 0.1386 |
| 370                 | 5        | 1         | 0.2129     | 0.2058    | 0.2062     | 0.0986    | 0.0022     | 0.1193 |
| 380                 | 5        | 1         | 0.0182     | 0.1785    | 0.037      | 0.1007    | -0.091     | 0.1146 |
| 320                 | 6        | 1         | -0.3039    | 0.1601    | -0.0857    | 0.0367    | -0.0773    | 0.0904 |
| 330                 | 6        | 1         | -0.0045    | 0.2528    | -0.0739    | 0.082     | 0.1081     | 0.1262 |
| 340                 | 6        | 1         | -0.2101    | 0.2514    | -0.0978    | 0.1119    | 0.0437     | 0.1282 |
| 350                 | 6        | 1         | 0.1804     | 0.3029    | 0.0574     | 0.0927    | 0.2434     | 0.1601 |
| 360                 | 6        | 1         | 0.5409     | 0.2639    | 0.1084     | 0.0969    | 0.0669     | 0.162  |
| 370                 | 6        | 1         | 0.1353     | 0.2265    | -0.0232    | 0.0783    | 0.0784     | 0.1554 |
| 380                 | 6        | 1         | 0.1501     | 0.2285    | 0.2437     | 0.0993    | 0.0451     | 0.1378 |