**Tree circumference dynamics over short time scales using automated dendrometer bands in four forests**

Valentine Herrmann, Sean M. McMahon, Matteo Detto, James A. Lutz, Stuart J. Davies, Chia-Hao Chang-Yang,Kristina J. Anderson-Teixeira

# S3 Appendix. Relationship between *Tband* and *Tair*.

The ensemble temperature records (*Tband*) of each site aligned as expected with air temperature (*Tair*) measured at a nearby weather station. Based on linear regression analysis, *Tband* and *Tai*r were closely correlated at all sites (all R2 ≥ 0.74, Table S2 below). *Tband* had a slightly smaller daily amplitude (i.e., lower maximums and higher minimums), as is to be expected for understory environments relative to above-canopy conditions or open fields (where Tair was measured).

# S3 Table. Comparison of *Tband* and *Tair*. Reported are mean temperatures, differences in daily amplitudes (amplitude of *Tair -* amplitude of *Tband*) and linear regression results (dfn and dfd are numerator and denominator degrees of freedom of the F statistic).

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | mean *Tband* | mean *Tair* | mean difference in daily amplitude | F |  |  | R2 | p | slope | | |  | intercept | | |
| Site | dfn | dfd | est | *t* | *p* |  | est | *t* | *p* |
| SCBI | 20.67 | 21.35 | -1.87\* | 1.82 105 | 1 | 5943 | 0.97 | <0.001 | 0.78 | 428.2 | <0.001 |  | 3.98 | 100.6 | <0.001 |
| SERC | 23.32 | 24.17 | -2.60\* | 1.72 104 | 1 | 5915 | 0.74 | <0.001 | 0.67 | 131.02 | <0.001 |  | 7.20 | 57.94 | <0.001 |
| WFDP | 15.30 | 15.23 | -1.88\* | 5.53 104 | 1 | 5950 | 0.90 | <0.001 | 0.84 | 235.13 | <0.001 |  | 2.94 | 51.56 | <0.001 |
| BCI | 25.91 | 25.75 | -1.03\* | 5.33 104 | 1 | 6046 | 0.90 | <0.001 | 0.83 | 230.8 | <0.001 |  | 4.41 | 47.3 | <0.001 |

\*significantly different, based on paired t-test.