Erratum to: An efficient forward model of the climate controls on interannual variation in tree-ring width

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Several tree-ring width chronologies used in the original publication of this article contained a numeric code for missing values and other numeric information, which were inadvertently read and analyzed by our automated code as actual data. Simulations at 35 out of 317 tree-ring sites in the M08 network of our study were affected. Here, we present revised figures and tables derived from applying the original methods to the 282 chronologies which did not contain missing values. In all cases, the non-data values were at the ends of the chronologies. Figure 1 shows a frequency plot of the number of missing years in each chronology containing non-data values. The sites removed from the original data set were all in the western United

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Fig. 1 Frequency plot of the number of missing years of data in the 35 sites with non-data values

States (Fig. 2), a region which the remaining sites in the M08 network still cover well.

Several statistics reported in the results section 3.2.3 also need revision. The changes from calibration to validation interval in the percentage of the network simulated

Fig. 2 Locations of sites from the M08 network which contained non-data values

Table 1 (Revised Table 3) Mean percentage of sites, across an ensemble of 100 simulations, whose simulations correlate significantly with observed tree-ring width chronologies at two significance levels in the M08 network

	M08 network (N = 282)					
	PC Regr., site-by-site		VS-Lite, site-by-site		VS-Lite, global	
	Calibration	Validation	Calibration	Validation	Calibration	Validation
$p < 0.01$	73% $\pm$ 3%	40% $\pm$ 3%	70% $\pm$ 2%	59% $\pm$ 3%	47% $\pm$ 3%	49% $\pm$ 3%
$p < 0.05$	83% $\pm$ 3%	56% $\pm$ 3%	81% $\pm$ 2%	71% $\pm$ 3%	60% $\pm$ 3%	62% $\pm$ 3%

Results shown for simulations by principal components regression calibrated at each site, simulations by VS-Lite with parameters calibrated at each site, and simulations by VS-lite with a single, “global” parameter set calibrated on the network as a whole. Errors represent 1 standard deviation in the percentages simulated significantly across ensemble members

Table 2 (Revised Table 4) Correlation and significance of temporal loadings of significant patterns of mean M08 network calibration and validation fields, as simulated by VS-Lite and PC regression, with the corresponding principal components of the observed field

Model	Pattern order	Low-frequency		High-frequency	
		Calibration	Validation	Calibration	Validation
VS-Lite	1	0.68, $p < 0.01$	0.63, $p < 0.01$	0.73, $p < 0.001$	0.69, $p < 0.001$
VS-Lite	2	0.54, $p < 0.05$	0.52, $p < 0.05$	0.30, $p < 0.01$	0.29, $p < 0.01$
PC Reg	1	0.82, $p < 0.001$	0.71, $p < 0.01$	0.83, $p < 0.001$	0.74, $p < 0.001$
PC Reg	2	0.51, $p < 0.05$	0.39, $p \approx 0.12$	0.54, $p < 0.001$	0.37, $p < 0.001$

Low- and high-frequency components are given by a 5-year running filter of the temporal loadings and their residuals, and significance of low-frequency correlations are computed using a 2-sided t -test with the effective number of degrees of freedom estimated by the signal length divided by the length of the low-pass filter

Fig. 3 (Revised Figure 4) Mean validation-interval significance of correlations of ring width simulations with observations over a 100-member ensemble of simulations of the M08 network. Ensemble

members differ in their randomized calibration intervals. *Black circles: $p < 0.01$, gray circles: $p < 0.05$, white circles: $p > 0.05$*

Fig. 4 (Revised Figure 5)
Performance indices of modeling by VS-Lite and principal components regression on the M08 Network. *Left panel* plots the fraction of network sites whose simulations correlate significantly with observations at a range of p -values for three different simulation approaches. *Right panel* plots the stability index (Eq. 3) of simulations by VS-Lite versus PC regression, with one indicating perfect stability of simulations from the calibration to validation periods, and zero representing complete instability. Two hundred and one out of 282 points fall above $y = x$

Fig. 5 (Revised Figure 6) *Top*: first pattern in observed (*left*) and simulated (*right*) data, M08 network, 1895–1984. *Center*: time series associated with first observed (*dashed*) and simulated (*solid*) EOF patterns. *Bottom*: mean over simulated years of the mean validation

field temperature and moisture response functions, projected onto the first simulated MVF EOF. *Dashed lines* give the 95% confidence bands derived from percentiles of the repeated experiments under randomized calibration intervals

Fig. 6 (Revised Figure 7) As in Fig. 5, except displaying results for the second pattern

skillfully are now 10% and 27%, respectively, for VS-Lite and PC regression simulations. Out of 282 simulations, 201 have a greater index of stability when computed with the VS-Lite model rather than PC regression. The first, second, and third observed and simulated empirical orthogonal functions have spatial correlations of $r = 0.78$, $r = 0.40$, and $r = 0.52$, respectively, and the first three observed EOFs account for 30% of the network signal variance. Finally, while the high and low frequencies of the first

principal component generated by PC regression still correlate significantly with observation in the validation period, only the high-frequency band does for the second principal component.

Conclusions and inferences stated in the abstract, discussion, and conclusions section of the original article are unaffected by this error.

See Tables 1 and 2, Figs. 3, 4, 5, 6 and 7.

Fig. 7 (Revised Figure 8) As in Fig. 5, except displaying results for the third pattern