





Retraction Note: Evidence of unprecedented rise in growth synchrony from global tree ring records

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This Article is being retracted by the authors as the result of a coding error, correction of which undermines the main conclusions of the study. This was an inadvertent error related to the use of the ‘use=pairwise.complete.obs’ option in the function ‘cor.test’. This function was used to estimate the correlation matrix between all tree-ring series. We had assumed the option pairwise.complete.obs would fully exclude tree-ring series with incomplete records for each time window. Unfortunately, ‘not available’ (NA) values were excluded only on a pairwise base between tree-ring series within each time window. This resulted in shorter time series being retained and inconsistent time windows in recent years and, consequently, a greater chance of higher correlation coefficients. When we excluded all incomplete tree-ring series for each time window in subsequent analyses, as was our original intention, the recent increase in synchrony originally reported in this Article (Figs. 2,3) is, unfortunately, mostly an artefact of this coding error. Because our sensitivity analyses all used the same correlation functions and option, we did not detect this error until S. Klesse, R. Brienen and R. Peters brought it to our attention. In fact, the consistent response in all sensitivity analyses reinforced our original interpretation. The sub-sampling sensitivity analysis (Supplementary Fig. 5b) remains unaffected by this coding error, since samples were selected to maintain a constant sample size and exclude all NAs. However, the increasing synchrony trend in this analysis is of much smaller magnitude and spatial scale than the originally reported trend, and thus would require examination on its own. Because the main conclusion of this paper is now unsupported, all authors agree to this retraction. We thank S. Klesse, R. Brienen and R. Peters for quickly detecting and informing us of this error.

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