



## **Bayesian testing for synchrony of events in glacial proxy archives**

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Often chronological uncertainties are ignored in multi-site comparisons, resulting in potentially wrong assumptions concerning (a)synchrony of events between archives. We explore this problem in a Bayesian framework, constructing millions of plausible wiggle-match age-models in order to quantify the chronological uncertainties within and between proxy archives. Using these data we can now calculate the statistical probability that events indeed coincided. The method is applied to a high-resolution  $^{14}\text{C}$  and OSL dated lake core from south-eastern France which largely predates the IntCal04  $^{14}\text{C}$  calibration curve. Depending on the applied comparison curve, events in this core appear synchronous or asynchronous with events in the NGRIP ice core.