

## A 300-year floating chronology of tree-ring oxygen isotope derived from teak log coffins in northwestern Thailand

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Oxygen isotope ratio of tree-ring cellulose is widely used to reconstruct hydroclimate variations in monsoon Asia. Long tree-ring chronologies are required for better understanding of monsoon dynamics. In this context, we developed a 300-year floating chronology of oxygen isotopes using teak log coffins collected at the Ban Rai Rockshelter in northwestern Thailand. Radiocarbon-based wiggle matching for log coffin indicates that the outermost ring was produced in 345-390 CE ( $2\sigma$ ). Spectral analyses reveal significant peaks in 27.0 and 9.3 years as well as 3.8 and 3.5 years, which fall within the range of ENSO variability. Because log coffin culture has long history in this region, a long chronology can be constructed by measuring other coffin samples. In addition, tree-ring data in collaboration with archeological findings will shed more light on the relationship between climate variability and human activities.

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