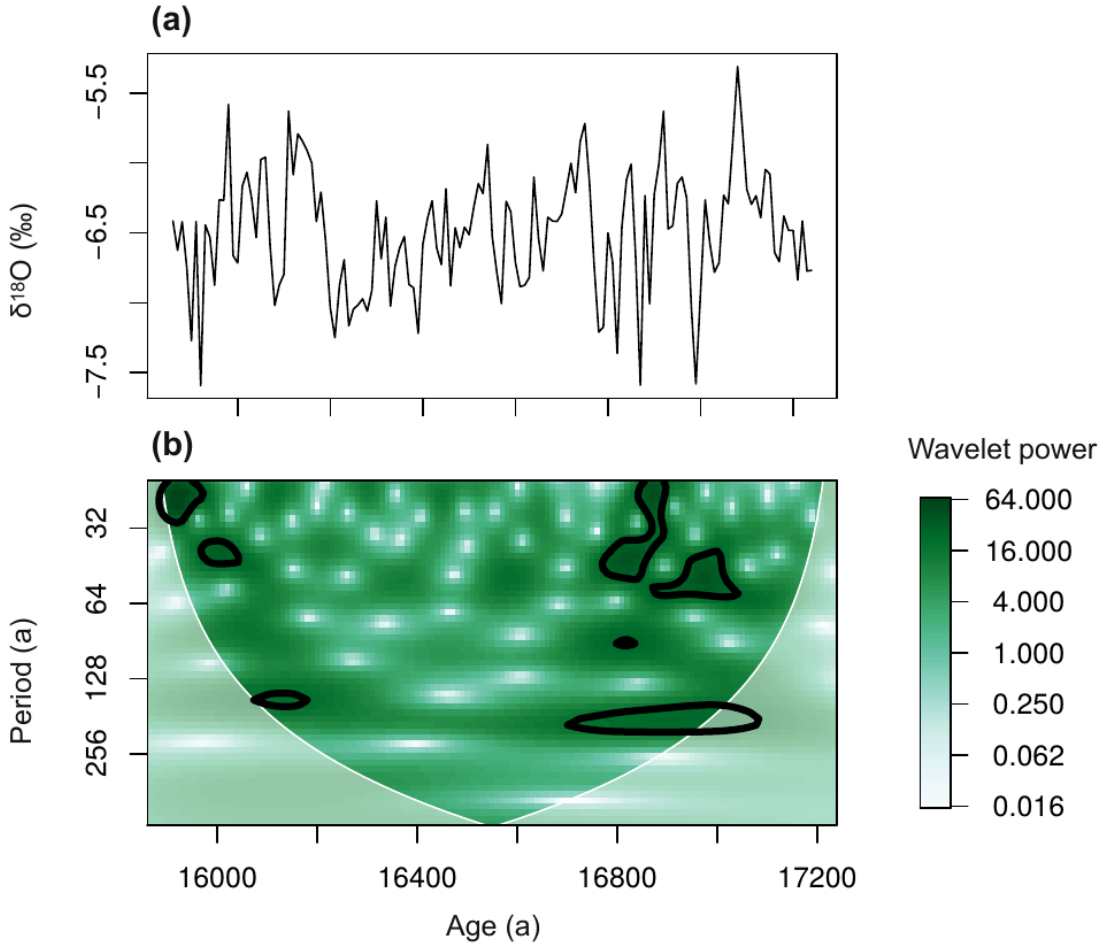
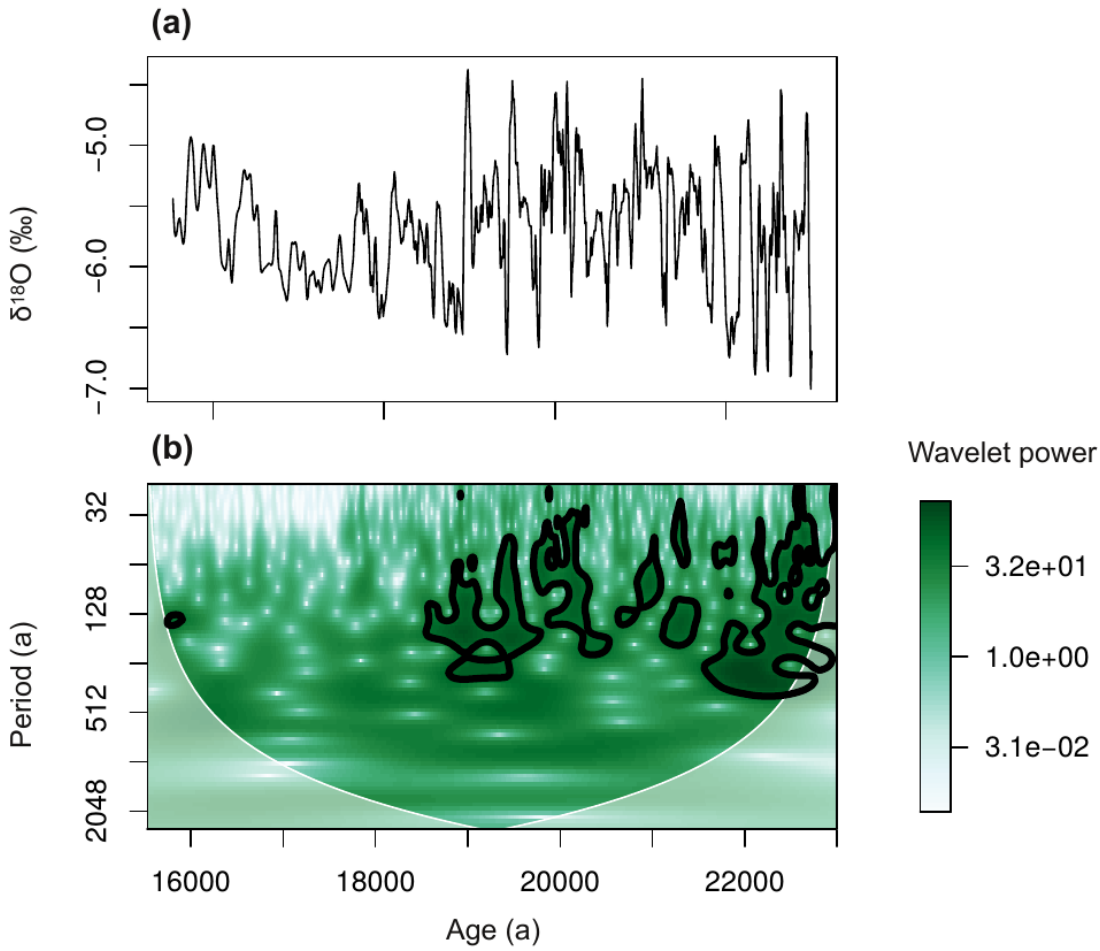
**Below:** Wavelet analysis in response to Reviewer 4, L531.




*Wavelet power for MC-S1 $\delta^{18}O$. Panel **a** shows the time series interpolated onto a regular grid, **b** shows the wavelet power analysed using a Morlet wavelet and a continuous wavelet transform (Torrence and Compo, 1998) implemented by the* `biwavelet` *R package (Gouhier et al., 2017). The wavelet power is bias-corrected following Liu et al. (2007); the black contour lines enclose regions with a significance level* $> 0.95$ *according to a* $\chi^2$ *test. The global wavelet spectrum, i.e. the time average of the power spectrum, has a broad peak centred on* $\sim 180$ *a in agreement with the Lomb-Scargle method presented in the main text.*




*Wavelet power for MC-S2 $\delta^{18}O$, where panels have the same meaning as the previous figure. The power spectrum in MC-S2 has more structure than MC-S1, partly because it is longer. Like MC-S1, there is a peak in the global wavelet spectrum at ~ 180 a. The 180 a period is usually present over time, but falls below the threshold of the $\chi^2$ test between 16 and 18.5 ka. The apparent decrease in low-frequency power around 16 to 18 ka is an artefact of the interpolation applied to the more widely-spaced samples in the original data during this period.*

**References**

Gouhier, T. C., Grinsted, A., and Simko, V. 2017. R package "biwavelet": Conduct Univariate and Bivariate Wavelet Analyses (Version 0.20.15). Available from https://github.com/tgouhier/biwavelet

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Torrence, C., and G. P. Compo. 1998. A practical guide to wavelet analysis. Bulletin of the American Meteorological Society 79:61–78.