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Oral presentation:

## **Implications of the Late Glacial Terrestrial Radiocarbon Calibration Dataset from Lake Suigetsu, Japan**

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Radiocarbon provides one important way of placing different records on a common timescale. To use radiocarbon for chronological purposes requires an appropriate record of the past radiocarbon levels in the relevant reservoir. InCal09 ([Reimer et al. 2009](#)) provides a useful summary for the entire period 0-50 ka BP. However, this consensus curve contains principally marine data prior to the present ( $\approx 12.5$  ka) tree-ring limit.

The new SG06 sediment core from Lake Suigetsu, central Japan ([Nakagawa et al. 2011](#)) provides an opportunity to compare atmospheric and marine radiocarbon measurements over the full range of the technique, since the record is varved throughout the pre-Holocene period and contains short-lived terrestrial plant remains suitable for AMS dating. The use of this record for informing calibration issues relies upon high-quality and robust varve analysis, together with a large number ( $\approx 600$ ) of radiocarbon dates.

This paper will examine the Late Glacial period, for which the varve analysis is now complete, and discusses the implications for our understanding of the leads and lags in  $\Delta^{14}\text{C}$  between the atmosphere and oceans during this period. Specifically, this has important implications for the timing of the Younger Dryas as determined by terrestrial and marine radiocarbon dates.

### **References:**

[Nakagawa T et al. \(2011\)](#) *Quaternary Science Reviews*, **in press**.  
[Reimer PJ et al. \(2009\)](#) *Radiocarbon* **51** (4), 1111-1150.