



20th International Radiocarbon Conference, Hawai'i, USA

(31st May-5th June 2009)

Oral presentation:

Developments in the Calibration and Modelling of Radiocarbon Dates

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Calibration is a core element of radiocarbon dating and is undergoing rapid development on a number of different fronts. This is most obvious in the area of radiocarbon archives suitable for calibration purposes, which are now demonstrating significantly greater coherence over the earlier age range of the technique. Of particular significance to this end is the development of purely terrestrial archives, such as those from the Lake Suigetsu sedimentary profile ([Staff *et al.*, this conference](#)) and Kauri tree-rings from New Zealand, in addition to the groundwater records from speleothems. Equally important, however, is the development of statistical tools that can be used with, and develop, such calibration data. In the context of sedimentary deposition, age-depth modelling provides a very useful way to analyse series of measurements from cores, with or without varve information. New methods are under development, making use of model averaging, that generate more robust age models. In addition, all calibration requires a coherent approach to outliers, both for single samples and where entire datasets might be offset relative to the calibration curve. This paper will look at current developments in these areas.