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Poster presentation:

Suigetsu Varves 2006: Varve Counting by XRF Core Scanning

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An earlier study of the Lake Suigetsu sedimentary archive remains one of the most comprehensive terrestrial records of radiocarbon ([Kitagawa and van der Plicht 2000](#)), but the core was not entirely continuous. In 2006 a new core (SG06) was taken from Lake Suigetsu from four bore holes, ensuring complete recovery of the entire 73.19 m sequence. As well as being extremely rich in terrestrial leaf fossils, providing a unique, truly atmospheric, record of radiocarbon throughout much of the period (10-60 kyr BP), the Suigetsu sediment is annually laminated for much of its depth. This project aims to contribute to the international terrestrial radiocarbon calibration model, extending it to 50,000 years using the new SG06 Lake Suigetsu sediment core.

Together with the parallel programme of AMS radiocarbon measurement (Bronk Ramsey *et al.*, this conference), varve counting is being carried out using two different and independent methods: thin-section microscopy at the GeoForschungsZentrum, Potsdam, and high-resolution ItraxTM X-ray fluorescence and radiography at Aberystwyth University. Here we introduce the novel approach of XRF and radiographic core scanning for varve counting and present some preliminary results.

Reference:

Kitagawa H and van der Plicht J (2000) *Radiocarbon* **42** (3), 369-380.