Direct U-series dating of fossil human bone by laser ablation MC-ICPMS

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The recent application of laser ablation ICP-MS to U-series dating allows the measurement of U and Th isotopes in tiny samples and at a high spatial resolution. This technique is ideal for U-series dating of valuable human fossils because it can be made virtually non-destructive, and because the spatial distribution of U-series isotopes is required to model uranium uptake in bone using the diffusion-adsorption model.

We present results of recent dating studies on human fossils, including direct dating of the early anatomically modern human Omo Kibish 1.