

New research will allow more reliable dating of major past events

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New method could be used to date items like a recently discovered baby mammoth in Siberia.

Academics have developed a new method which will allow key past events to be dated more accurately.

Research led by Professors Paul Blackwell and Caitlin Buck from the University of Sheffield's School of Mathematics and Statistics and Professor Paula Reimer from Queen's University Belfast has resulted in a new, internationally agreed radiocarbon calibration curve which will provide improved accuracy to archaeologists, [environmental scientists](#) and climate researchers who rely on radiocarbon dating to put their findings onto a reliable time-scale.

The release of the new curve will mean that more precise date estimates can be obtained than previously possible and will reduce uncertainty about the timing of major events in the history and development of humans, plants and animals and the environments in which they lived.

The radiocarbon calibration curve would allow researchers to reliably date everything from items like the recently excavated bones of King Richard III, to confirm they were from the right time period, to baby [woolly mammoths](#) preserved in permafrost in Siberia. It also provides reliable time-scales for those seeking to understand ancient environments, including members of the International Panel on Climate Change.

Professor Caitlin Buck, from the University of Sheffield, said: "We are proud to have developed such an important tool for archaeologists and environmental scientists, allowing them to more accurately date their findings and reduce uncertainty about the timings of major events. We're also grateful to the more than 30 other scientists who have shared data and research ideas with us to make it all possible."

Professor Paula Reimer, from Queen's University Belfast added: "This project built on research begun in the 1980s at Queen's and elsewhere and is essential for the continued utility and development of [radiocarbon](#) dating."

More information: The research paper is published in the current issue of the journal *Radiocarbon* and can be viewed in full via www.radiocarbon.org/

Provided by University of Sheffield

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