

Abstract Submitted
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AMS Radiocarbon Dating at Notre Dame SEAN HOWARD, University of Notre Dame — Current development of a local radiocarbon dating method using Accelerator Mass Spectrometry (AMS) at the University of Notre Dame seeks to provide sensitive, reproducible, and accurate measurements for future interdisciplinary projects. While AMS has been the premier radiocarbon dating method for a few decades, repurposing Notre Dame's FN Tandem accelerator for radiocarbon dating has provided many unique challenges. Experiments have shown radiocarbon dating possible and reproducible using the FN Tandem accelerator, found optimal settings for said accelerator, and established sensitivity limits comparable to dedicated radiocarbon dating facilities. In addition, there is ongoing work to create a local chemistry lab to convert organic artifacts into graphite samples to be dated locally. Once the chemistry side has been completed, several artifacts from the IAEA's radiocarbon intercomparison have been procured. Dating these previously studied artifacts will provide an additional measure on the accuracy and repeatability of both the accelerator and chemical treatment. Provided that these IAEA artifacts are dated successfully, exciting projects will ensue, such as the authentication of artwork and dating of anthropological samples.

Sean Howard
University of Notre Dame

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