



Contribution ID: **220** Contribution code: **PSA-62**

Type: **Poster**

## Preperation of metallic calcium samples for $^{41}\text{Ca}$ dating

*Monday, 21 October 2024 17:55 (20 minutes)*

Calcium is a major element in the biosphere and lithosphere. Its cosmogenic isotope  $^{41}\text{Ca}$ , with a half-life of 99 thousand years<sup>1</sup>, can trace environmental processes at an age scale beyond the reach of  $^{14}\text{C}$ . Here, we achieved the analysis of  $^{41}\text{Ca}$  in environmental samples using ATTA, and a single analysis requires 80mg of metallic calcium. In addition, we have developed a process for preparing metallic calcium samples from different types of environmental samples for the application of  $^{41}\text{Ca}$  dating. The sample types and extraction efficiency are granite (40%), loess (60%), bone (90%), seawater (90%), foraminifera (90%), and coral (90%), respectively.

### Student Submission

Yes

**Primary author:** ZHU, huimin (USTC)

**Presenter:** ZHU, huimin (USTC)

**Session Classification:** Poster Session A

**Track Classification:** Sample Preparation Techniques