

## Improved $^{10}\text{Be}$ preparation to reduce analytical background for earth surface process studies

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Due to advancement of Accelerator Mass Spectrometry (AMS), *in situ* produced beryllium-10 ( $^{10}\text{Be}$ ) in quartz has been used for earth surface process studies, such as surface exposure dating (*e.g.* Yamane *et al.*, 2011), erosion rate estimations (*e.g.* Shiroya *et al.*, 2012), tectonic processes (Yokoyama *et al.*, 2005) and so forth (*e.g.* Gosse and Phillips, 2001). In order to expand the applicability of this technique, the sample with low  $^{10}\text{Be}$  concentration need to be measured with high precision. This requires reduction of background that is often affected isobars (boron-10). We have conducted several attempts and found that the length of time exposed to the ambient atmosphere during the oxidization process is the most important step to increase  $^{10}\text{Be}$  background (Yokoyama *et al.*, submitted). In this presentation, we discussed our experimental results and potential improvement of topics for understanding of earth surface process.

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