

## 地球表層物質の宇宙線生成核種( $^{10}\text{Be}$ , $^{26}\text{Al}$ )の分析方法の改良と地球科学研究

### In-situ and meteoric $^{10}\text{Be}$ and $^{26}\text{Al}$ measurements: Improved preparation and application at the University of Tokyo

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Cosmogenic radionuclides have been widely used to decipher Earth surface processes. At the University of Tokyo Accelerator Mass Spectrometry facility (5 MV Tandem accelerator), we have been measuring both in-situ and meteoric cosmogenic  $^{10}\text{Be}$  and  $^{26}\text{Al}$ . In this presentation, we report some development of methodology, including how to prepare target samples chemically to reduce their background. We then introduce some examples using the method to provide further insights into earth surface processes. These studies include: i) exposure to reveal the history of the growths and decays of the Antarctic ice sheet, ii) studying ice shelf collapse history, iii) palaeomagnetic excursion reconstructions using ice cores, iv) understanding the erosion rates using depth profiles of mid latitude outcrops, v) providing the timing of impact crater formation.

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