

地球科学輻合部特別講演会

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日時： 2008年11月18日(火) 16時半～

場所： 理学研究科6号館203号室

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題目： Isotope geochemistry:

Fingerprinting rapid climate changes of the past

講演者： Yusuke Yokoyama (横山祐典)

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要旨：

Advances in palaeoenvironmental research often depend on developments in analytical methods involving measurement of isotopes in geological archives. Particular highlights, over the last decade, include the introduction of Accelerator Mass Spectrometry (AMS) and Thermal Ionization and Plasma Mass Spectrometry (TIMS, ICPMS) to measure low abundance isotopes using trace amounts of sample material. These analytical tools have significantly advanced our knowledge of past climates as the system is complex and requires high resolution spatial and temporal data sets to better understand the underlying principles.

My group has been tackling problems relating to the late Quaternary climates (ca. for the last 100,000 years in particular) and collaborating with institutions inside and outside of Japan. I would like to address 3 topics that we are currently working on: Firstly, our study of ocean sediment cores from the Timor Sea, in North Western Australia, to determine the timing of the onset of intensification of the Australian Monsoon. Secondly, the melting history of Antarctic ice sheets using cosmogenic radionuclides ( $^{10}\text{Be}$  and  $^{26}\text{Al}$ ) and selective organic geochemical methods. Then, I would like to touch upon the contentious topic of a possible relationship between solar activity and climate, if time allows.

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