

# Preliminary results of geochemical proxies on the Ross Sea Continental shelf: IODP Site U1523

Sunghan Kim<sup>1,\*</sup>, Jae Il Lee<sup>1</sup>, Min Kyung Lee<sup>1</sup>, Kyu-Cheul Yoo<sup>1</sup>, Rob M.  
McKay<sup>2</sup>, and the IODP Expedition 374 Scientists

Korea Polar Research Institute<sup>1</sup>, Victoria University of Wellington<sup>2</sup>

It is important to understand past ice sheet dynamics for many reasons. Because the West and East Antarctic Ice Sheets merged onto the Ross Sea, understanding of the ice sheet variation, particularly in the Ross Sea, is crucial. Previous studies showed that geochemical proxies respond to surface environmental changes on the shelf in association with ice sheet advance/retreat. Site U1523 was collected from the Ross Sea continental shelf during International Ocean Discovery Program (IODP) Expedition 374. We measured biogenic opal, total organic carbon (TOC), and CaCO<sub>3</sub> concentrations from the top 16 m of Site U1523 to reconstruct the late Pleistocene surface water productivity changes in response to ice sheet advance/retreat. Since our preliminary geochemical results show cyclical variations, the variation may be related to degree of duration of sea ice associated with ice sheet advance and retreat on the Ross Sea. Because this is preliminary results, more detailed study will be done in the future.