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Elemental abundances and paleoclimate implications: preliminary results from XRF core scanning of IODP Expedition 356 Site U1463

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International Ocean Discovery Program Expedition 356 cored seven sites along the northwestern shelf of Australia that primarily targeted changes in the Indonesian Throughflow and Australian climate over the past ~5 Ma. One of the northern sites, U1463, cored in the Northern Carnarvon Basin recovered a continuous and pristine Plio-Pleistocene record that will likely provide an unprecented archive of northwestern Australian climate development and its link to the Indonesian Throughflow. In this study, we used X-ray fluorescence core scanning to document changes in elemental abundances from approximately 5-1 Ma. Changes in elemental abundances, such as potassium and iron, can be used as proxies for changes in fluvial and eolian input, respectively. These can be linked to changes in aridity on the Australian continent and should provide additional constraints on the onset of the Australian monsoon and its relationship to restriction of the Indonesian Throughflow over time. Additional elemental ratios may provide more information on paleoproductivity in the region since the early Pliocene, which may be related to the strength of the Leeuwin Current that is, in turn, controlled by the Indonesian Throughflow.