

Exp. 325 Great Barrier Reef Environmental Changes

YOKOYAMA, Yusuke^{1*}

¹Yusuke YOKOYAMA

The Great Barrier Reef is the largest coral reef in the world and a world heritage site. Integrated Ocean Drilling Program (IODP) Expedition 325 drilled fossil corals and obtained 225m of core materials from 42 to 167 m below sea-level. The site is suited for reconstructing paleo climate data because: 1) reconstructed sea-level data is relatively immune from isostatic effect since it is located at site far from former ice covered regions (far-field), 2) it locates in or near the Indo Pacific Warm Pool (IPWP) where paleo sea surface temperature (SST) data will constrain climate model strongly, and 3) the growth history of the reef since the LGM is to unlock a key factors for reef system response against environmental changes. Both sea level and climate data have been reconstructed by the science party and they provides new insights of the climate system. In this presentation, I will overview and introduce some key findings of IODP 325 GBR environmental changes (Yokoyama et al., 2011)

Reference: Yokoyama, Y. et al. (2011) "IODP Expedition 325: Great Barrier Reefs Reveals Past Sea-Level, Climate and Environmental Changes Since the Last Ice Age" Scientific Drilling, 12, 32-45.

Keywords: Sea level change, Glacier, Last Glacial Maximum, Sea Surface Temperature, Coral, The Great Barrier Reef