



## **Potential Antarctic Ice Sheet volume during the Last Glacial Maximum by sea-level fingerprinting using glacial isostatic adjustment modeling**

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Present Antarctic Ice Sheet (AIS) is the largest storage of freshwater in the Earth's surface, and its volume changes followed by global climate changes through glacial-interglacial cycle. The Last Glacial Maximum (LGM) is the timing of global ice-volume maximum around 20,000 years ago. This period plays an important role on understanding of glacial-period earth system due to a mutual comparison of a plenty of paleoclimatic proxies. However, the wide range of AIS component is occurred during the Last Glacial Maximum, corresponding to 5–30 m ice volume equivalent sea level (Clark and Tarasov, 2014). In this presentation, we demonstrate the LGM potential AIS volume by a sea-level fingerprinting analysis using glacial isostatic adjustment (GIA) model. Far- and intermediate- field sea-level data as the Barbados corals and the Bonaparte Gulf sediments would provide a crucial information of AIS volume during the LGM. This constrain is key to further understanding of global climate change and AIS history during glacial period, and also future climate changes represented by sea-level rising with AIS melting.

Reference: Clark and Tarasov, 2014. Closing the sea level budget at the Last Glacial Maximum. Proceedings of the National Academy of Sciences, vol. 111 no. 45 15861-15862