# 隆起海浜地形地質と完新世最高位旧汀線高度からみた最終氷期最盛期のグリーンランド氷床復元の問題点

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# Some problems for the reconstruction of the Greenland Ice sheet at the Last Glacial Maximum: Insight from the raised beach landforms and deposits and Holocene marine limits

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The Greenland ice sheet's response to present and future temperature change is a majour issue for elucidating the future sea-level rising (Lenton et al., 2005, Alley et al., 2010). The accurate reconstruction of the Greenland ice sheet at the Last Glacial Maximum (LGM) gives an important key for dissolution of these problems through the present satellite geodesy data which are revised by the Glacial isostatic adjustment (GIA) model (ex. Shepherd et al., 2012), and through the experiments with an atmosphere–ocean general circulation model (AOGCM) (ex. Ridley et al., 2005). The analysis of spatial and temporal variations of relative sea-level changes using the GIA model is one of useful tools for the reconstruction of ice melting history after the LGM (Fleming and Lambeck, 2004; Simpson et al., 2009).

The previous study have reported the Holocene marine limits (HML) and sea-level variations using many radiocarbon dating from the coastal area of West Greenland (ex. Kelly, 1973; Ten Brink, 1974, 1975; Weidick, 1968, 1972) and East Greenland (ex. Funder, 1978), and Reeh (1989) and Henriksen (2008) compiled the map showing the amount of uplift during the Holocene along the coastal area of Greenland. However, these compiled maps indicate the three extraordinary upheaval area with more than 100m in HML). Actually, Fleming and Lambeck (2004) and Simpson et al. (2009) have tried to make the reconstruction of the Greenland ice sheets at the LGM using these data.

In this presentation, we introduce the reappraisal for the reconstruction of the Greenland Ice sheet at the LGM from detailed geological and geomorphological field surveys on the raised beach deposits and GIA modelling.

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