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Comparison of glacial isostasy contribution to the sea level changes during the Holocene in West and East Antarctic regions.

Ksenia Poleshchuk (1,2), Sergey Verkulich (1), and Zina Pushina (3)

(1) Arctic and Antarctic Research Institute, Saint Petersburg, Russian Federation , (2) Saint Petersburg State University, Saint Petersburg, Russian Federation , (3) VNIIOkeangeologia named after I.S. Gramberg, Saint Petersburg, Russian Federation

Antarctica as geographically completed and tectonically compound continent is an interesting object for study of glacial isostatic adjustment (GIA) and sea level changes in the Holocene. The analysis of relative sea level curves is one of the most indicative approaches for glacio-isostasy estimation.
The present study focuses on two different regions of Antarctic margin which sea-level changes are well researched. We compare our relative sea-level curves for Bunger Oasis (East Antarctica) and King George Island (West Antarctica) that were obtained from new geomorphological, paleogeographical and micropaleontological data. The results showed notable difference: the maximum relative water altitude had occurred between 8 000 – 6 000 yr BP and had reached 12 m a. s. l. in the Bunger Oasis and 18-20 m a. s. l. in King George Island. Furthermore, the research of other Antarctic regions revealed significant differences in sea-level altitudes.
Following analysis of constructed curves and computative GIA models allow us to estimate the possible extent of glacial isostatic adjustment. Besides, this observation has indicated the importance of deglaciation rates and local tectonic features.
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