



New OSL data on the postglacial development of Narva-Luga Klint Bay (eastern Gulf of Finland. Baltic Sea)

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Onshore of the eastern Gulf of Finland (Baltic Sea) within the area of the Narva-Luga Klint Bay (lowland between the Narva and Luga rivers) a multiple depositional sequence was formed during the ice sheet degradation. It is represented mainly by periglacial accumulative sandy landforms. During the Holocene the lowland was substantially transformed by coastal-marine and alluvial processes. A relict of presumably glaciofluvial landform (a series of pebble-sand clinofolds forming the glacial delta according to GPR data) (Ryabchuk et al., 2018) located in the area of Holocene deposits development was dated using OSL method. According to this dating the age of subsurface part of the glaciofluvial landform is 13-10.8 thousand cal. yrs. BP. The glaciofluvial deposits are covered by a thin sandy layer which was formed 8.1 ± 0.8 thousand cal. yrs. BP according to OSL dating of the sample collected at the height range from +11.8 to +12.3 m.s.l. Consequently this sandy layer was formed during the first transgression of the Littorina Sea, the maximum of which was achieved 7.5 thousand cal. yrs. BP. The study was supported by Russian Science Foundation (project № 17-77-20041).

References:

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