



Triggering of the Hinlopen/Yermak Megaslide (Arctic Ocean) in Relation to Climate History of Svalbard

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With increasing interest in slope stability issues on continental shelves the causes and trigger mechanism of submarine slides move into the scientific focus. Here we present an assessment to the paleo-environmental conditions as well as trigger mechanism of the Hinlopen/Yermak Megaslide north of Spitsbergen that lead to the catastrophic failure event, including sea-level, paleoceanographic circulation, tectonics and earthquakes. We conclude that the Hinlopen/Yermak Megaslide has been the consequence of the rapid onset of Late Weichselian glaciation resulting in a drastic sea-level drop, asymmetrical ice loading and a fore bulge development. As the final trigger we assume a strong earthquake positioned below or close to the SE-Sophia Basin.