## Poster Presentation

## HIGH-RESOLUTION SEISMIC STRATIGRAPHY, GLACIGENIC SEDIMENTARY PROCESSES AND SEAFLOOR MORPHOLOGY IN THE CHUKCHI RISE (THE ARCTIC OCEAN): PRELIMINARY RESULT

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## **ABSTRACT**

The Chukchi Rise in the Arctic Ocean is a northward extension of the Chukchi continental shelf. Evidence for widespread glacial-sedimentary processes are recorded in the subsurface sediments and submarine landforms in this region. Densely spaced high-resolution sub-bottom profiler (SBP) data and multibeam bathymetry grid were acquired in the southeastern slope of the Chukchi Rise during the RV Araon expeditions of in 2016 and 2018 in the frame of the KOPRI-AMAGE project (PM18050). The SBP data show the large scale (a few to tens of km lateral extent and ca. 20-m thick) wedge-shaped sediment body of transparent acoustic facies interbedded with laminated sediments in the shelf edge and upper slope. Distinctive seafloor morphological features (e.g. mounds, shelf-edge parallel ridges, undulated seafloor, and curvy and streamlined lineation) are recognized on the multibeam bathymetry grid. In this study, we classified acoustic facies and defined major seismic stratigraphic unit boundaries to identify the spatio-temporal distribution of acoustic facies, paleo-bathymetry and sediment thickness. The newly acquired subsurface and bathymetric data could provide useful insight into the former ice sheet behavior and subglacial, ice-marginal, and glaciomarine sedimentary processes. Our results will be used to reconstruct sedimentary processes relating to ice sheet evolution, formation of gas hydrate mounds, slope stability with changes of sedimentation in the Chukchi Rise through the Late Neogene and Quaternary.

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