

# Variability of particle fluxes and its implication for Paleoclimate reconstruction over the last 400 000 years in the Central of the Arctic Ocean

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The Arctic Ocean has an important role in the global climate. Freshwater is necessary to maintain low salinity surface water, which allows the sea ice formation. Thus, variations in freshwater budget influence the extend of the sea ice cover, which in turn modify the albedo, the energetic budget and salinity/temperature conditions of the surface water inducing feedback on Earth's climate. In the context of the actual climatic changes it is necessary to reconstruct the climatic history of the Arctic Ocean in order to estimate its natural variability. U-series isotopes have been comprehensively used in sediment cores from the North Atlantic area in order to reveal sedimentation, scavenging, lateral transport rates. However, despite its utility in paleoceanography, the U-series isotopes have not been extensively use in the Arctic Ocean. Here we will present applications of U-series isotopes in the central Arctic Ocean. Based on sediment cores retrieved during the HOTRAX expedition in 2005, we used U-series isotopes ( $^{210}\text{Pb}$ ,  $^{230}\text{Th}$ ,  $^{231}\text{Pa}$ ) and radiogenic isotopes Sr-Nd-Pb to constrain the chronostratigraphy and sedimentology of the central Arctic sediment.

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