

## Past 60 kyr changes in the diatoms and glacial sediment supply to the Gulf of Alaska (IODP Exp. 341 Site U1419)

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Integrated Ocean Drilling Program (IODP) Expedition 341 during May to July, 2013 has achieved collecting continuous sediment records in the Gulf of Alaska (GoA) to examine the response of an orogenic system to the establishment of a highly erosive glacial system. Obtained Cenozoic sediments permit to seek their relationship to the circum-North Pacific paleoenvironmental changes at extremely high time-resolution. Together with distal location of drilling sites to the ice-sheet and regional sedimentation process of less influenced by the on-land systems of sedimentation, transportation and supply, ensures execute aforementioned research objectives.

In this presentation, we will present preliminary outlines, including analyses of diatoms, physical properties and foraminiferal oxygen isotopes, using the Holocene sediment samples drilled at the continental shelf (Site U1419). According to off-shore analyses, the estimated sedimentation rate at this site was 200 m/100 kyrs. The fossil diatom assemblages consists not only of several taxa which indicate the paleoceanographic changes but also of coastal and freshwater species and resting spores, which show the influences of continental environments and the nutrient fluctuation in water column. Their abundances with significant fluctuation show the paleoceanographic variation, changes in the development of ice sheets, the sedimentation rate with erosion and supply, and grain size of supplied sediments affecting the volume of pore water, as well as the dissolution of siliceous/calcareous microfossils during 100 ka to the present in the GoA.

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