

Paleoceanographic changes in the southwestern part of the Sea of Okhotsk: Results from analyses for IMAGES-MD01-2412 sediment core

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The Okhotsk sea is the area of sea where the sea ice is formed in the lowest latitude in the Northern Hemisphere. As for the sea ice, an expansion stage affected by climate change by the power of Aleutian Low and associated wind field. The formation of the sea ice is thought to influence the climate of the northwestern Pacific Ocean and the production of the north Pacific intermediate water so that it may be involved in the formation of sea ice concerning with low temperature, high salt, high dissolved oxygen concentration. On this point of view, it is very important of the elucidation of change in the sea ice in the long time scale in the Okhotsk Sea for understanding of climatic changes in the high latitude of Pacific Ocean. The terrigenous clastics were taken in transported by sea ice. After sea ice was melt they accumulate in the bottom of the sea. The series of these grains are called as ice rafted debris (IRD). There are many cases that grain size and mineral assemblages of IRD are different from surrounding layer. If IRD is found at a interval in sediment core, it becomes proof directly that the sea ice was distributed in the location and the age. This study focused on paleoceanographic changes during 100 kyrs in the southeastern part of Okhotsk. In this region, seasonal changes of surface currents are very clear, expecting that amplified climatic and oceanographic changes are recorded in the sediment core. In this study, we used a piston core IMAGES-MD01-2412, which were collected by the R/V Marione France near Shiretoko Peninsura. Ages of bottom of cores are estimated at about 100 kyrs, so that time resolution of the core will be expected very high. In this presentation, we will review lithology, age model, and topics of our research.