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Oxygen and Carbon Isotope Variations of Planktonic Foraminifera in MD01-2407 Core from the Japan Sea during the Last 130kyrs

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The oxygen and carbon isotopic compositions of 4 planktonic foraminifera species (Neogloboquadorina pachyderma, Globigerina umbilicata, Globigerina bulloides, Neogloboquadorina dutertrei) are measured for samples from MD01-2407 core collected from the Oki Ridge, the southern part of the Japan Sea. Measured samples are taken every 10cm from the top 15m of the core that covers the last 130kyrs.

The result shows that minimum oxygen isotopic composition values d 1 permil occurred in Marine Isotope Stage (MIS) 1, 2, 5e and 6, and maximum values d 3.5~4 permil occurred at around the boundary of MIS 1/2 and 5/6 boundaries. During the other intervals such as MIS 3 to 5d, the oxygen isotopic values are around d 2.5~3.5 permil and showed minor range of fluctuations.

Carbon isotopic values fluctuate between the range d -1~0.5 permil except the values of G.bullodes. The carbon isotopic values of G.bulloides reach d -2.5~-1.5 permil in MIS 5. Generally the carbon isotopic values of N.pachyderma are higher than those of G.bulloides and G.umbilicata.

The oxygen and carbon isotope variations of planktonic foraminifera are reconstructed as the first detailed oxygen and carbon isotope record from the Japan Sea that covered the last interglacial period.

Further information and discussion will be given in the presentation.