

## Palaeoclimatic analysis for 600 ka based on the TOC contents of MD01-2407 core from the Oki Ridge, Japan Sea

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We have measured total organic carbon (TOC) and total nitrogen (TN) contents of a sediment core, MD01-2407 (932 m depth, 55.28 m length), at 2 cm interval. This core was taken from the Oki ridge at the southern part of the Japan Sea in AD 2001. We used the age model which shows age-depth relation for MD01-2407 core proposed by Kido et al. (2007). This age model used 6 marker tephra layers, 7 <sup>14</sup>C dates, 3 TL layers and 14 delta <sup>18</sup>O events. This core covers the past 670 kyr.

TOC content is generally high in MIS 15, 13, 11, 9, 7, 5, 3 and 1 (about 1.5 - 5.0 %), and low in MIS 16, 14, 12, 10, 8, 6, 4 and 2 (about 0.8 - 1.2 %). This fluctuation pattern is very similar to the marine oxygen isotope curve LR04. TN content shows similar fluctuation with TOC. C/N ratio is constantly 9 - 10, suggesting that TOC is originated mainly from marine planktons. Temporal change of TOC of the sediment can reflect the change of biological productivity in the Japan Sea (Oba and Akasaka, 1990), which may be controlled climate change. This is an excellent record of paleoclimate over Middle and Late Pleistocene in the middle latitude region.

Keywords: TOC, TN, Japan Sea, MD01-2407