

Paleoclimatic changes around Lake Baikal during the past 5 million years based on the density measurement of sediments

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Sedimentary record of density from Lake Baikal in south-central Siberia (Baikal Drilling Project:BDP98) shows climate changes of the Eurasian continental interior during the past 5 million years. Density record from Lake Baikal may be a proxy that shows climate changes, as density is low in warm climate period and high in cold climate period.

Result of density analysis of BDP98 reveals gradual cooling of the Eurasian continental interior since about 2.8 million years ago.

Results of spectral measurements of the density record from BDP98 indicate existence of the spectral peaks of about 20 kyr, 40 kyr, 100 kyr and 400 kyr. These spectral peaks are shown by Milankovitch cycle. The spectral peak of 20 kilo year became especially stronger compared with record of the ocean since 0.3 million years ago. This suggests that the influential range of the east asian summer monsoon have extended toward the vicinity of Lake Baikal, and affected the climate system around.