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Lake-level changes and their factors during the last 45,000 years in Lake Nojiri, Central Japan.

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Stratigraphic analysis of acoustic records revealed that lake-level fluctuation repeated eight times in Lake Nojiri, Central Japan, during the past 45,000 years. Comparison of the lake-level record among profiles of pollen composition, TOC concentration both in Lake Nojiri, oxygen isotope record of NGRIP and those of Sanbao/Hulu caves, shows the lake level rose during the abrupt cold stages. Especially, high lake levels correspond with the global cooling events such as Younger Dryas, Heinrich events etc. The factors for the lake-level rise during cold stages are, decreased evaporation due to cooling and increased snowfall due to enhanced winter monsoon.

Keywords: Lake Nojiri, lake-level fluctuation, acoustic record, cold events, snowfall