

Paleoclimatic studies using polar ice cores

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Polar ice cores have been extensively used for extracting paleoclimatic and paleoenvironmental information, such as temperature, accumulation, atmospheric aerosols, mineral dust, greenhouse gases, cosmogenic radionuclides, deep-ice biology. They cover the timescales from one year to million years, and the geographical scales from local to global. Here I review the major achievements polar ice core projects, especially those that Japanese communities have played significant roles. They include the Dome Fuji and other ice cores in Antarctica, and NGRIP and NEEM ice cores in Greenland. The future plans of international and Japanese ice core science will also be reviewed.

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