

Paleoenvironmental reconstruction using Antarctic ice cores: FY2017 activities

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A KAKENHI project "Giant reservoirs of heat/water/material : Global environmental changes driven by Southern Ocean and Antarctic Ice Sheet", has started, and its subprojects include "Variations and interactions of climate and the Antarctic Ice Sheet". As a part of this subproject, ice cores from Dome Fuji and coastal areas, as well as marine sediment cores, will be analyzed to reconstruct paleoenvironment in various time scales. In particular, reconstructions are focused on the past atmospheric CO₂ for model input, stable isotopes of H₂O and noble gases for temperature reconstructions, aerosols for radiative forcing and biogeochemical cycles, and atmospheric CH₄ for understanding climatic instabilities. Ice core chronology will be improved and compared with model outputs and marine sediment records. Process studies for sea ice reconstruction will also be conducted. In this presentation, major FY2017 activities will be summarised.

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