

気候モデルで挑む: 地球環境変動史の謎解き

Solving the Mystery of Global Climate Change throughout the Earth's History with Climate Models

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Why did climate sometimes change abruptly in the past with only a small change in forcing? Explaining the mechanisms behind past climate changes during different time periods requires a fundamental understanding of climate change itself. This, in turn, is also important for better future climate projections. In this talk, I will show results from our recent modelling studies on the so-called "abrupt climate changes" during the ice age and deglaciation, as well as on the ice age cycles whose main periodicity changed from 40 kyr to 100 kyr. Why and how the ice age started and progressed in the past 5 million years is of much interest since it is related to and influenced life on earth and human evolution. We will also discuss the challenges associated with modelling the environmental changes in the deeper times of the past to gain a greater understanding of the earth, its climate and the history of life on the planet.

キーワード: 地球史、気候変動、気候モデル

Keywords: Earth History, Climate Change, Climate model