

# 地球科学輻合ゼミナール

## (2009年度 後期 第3回)のご案内

### 「Simulation of Younger Dryas Event and Its Implication for Future Climate Change」

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Using a coupled ocean-atmosphere model, this study explores the physical mechanism responsible for so-called abrupt climate change such as Younger Dryas events. In response to massive fresh water discharge into northern North Atlantic over 500 years, the simulated thermohaline circulation (THC) weakens in the Atlantic Ocean, reducing surface temperature over the northern North Atlantic and surrounding regions. Upon the termination of fresh water discharge on the 500th year, the THC begins to intensify, regaining its original intensity in a few hundred years. The sudden onset and termination of fresh water induce an irregular, multi-decadal fluctuation in the THC intensity, yielding almost abrupt climate changes.

A similar, but much weaker fluctuation of the THC is also evident in the control integration of the coupled model without freshwater forcing. It is often accompanied by the multi-decadal fluctuation of the subarctic gyre, which yields surface salinity anomaly similar to “Great Salinity Anomaly”.

11月 4日(水) 午後4:30~午後6:00

場所: 理学研究科6号館 201号室