

Simulating Freshwater Flux Induced Abrupt Climate Change in the Arctic/Atlantic Ocean

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- 1) What were the primary questions you were trying to address with this research? (Or, if more appropriate, was there a hypothesis or theory that you were trying to prove or disprove?)

We were not sure exactly what should be the right boundary condition for the salinity balance for the ice-ocean coupled model.

- 2) What have you discovered or learned that you didn't know before you started this work?

We found out the exact formulation of the suitable boundary condition for salinity balance in the ocean-ice coupled model.

- 3) What is the significance of your findings for others working in this field of inquiry and for the broader scientific community?

This project clarified the suitable boundary condition at the sea-ice and seawater interface, which can be very useful in modeling the ice in the Arctic Ocean.

- 4) What is the significance of this research for society?

The result from this study is a useful contribution to climate study related to high latitudinal ocean.

- 5) Have you published findings or web pages related to this research? Please provide a citation, reprint, and web link (when available).

Huang, R. X., and X. Z. Jin, 2007. On the natural boundary conditions applied to the sea-ice coupled model, J. Geophys. Res., 112, doi:10.1029/2006JC003735.