A conceptual model of oceanic heat transport in a Snowball Earth scenario Manuscript # esd-2015-84

Darin Comeau, Douglas A. Kurtze, Juan M. Restrepo

Center for Atmosphere Ocean Science, Courant Institute of Mathematical Sciences, New York University, New York, NY, USA

Technical Corrections:

- 1. typo in line 175: "with the an albedo"? Corrected.
- 2. the box indices are wrong in a number of equations, instead of ut and up the authors sometimes use st and sp, please check. *Corrected*.
- 3. in Eq. 2 and following the delta of the time derivative is a Greek delta but should be a Latin d. Corrected in Eqn (2), (3), and (11).
- 4. What is the vertical purple line in Fig. 5d? This discontinuity is an artifact of the regularization of Eqn (10) as the ice thickness h goes to 0. This has been mentioned in the caption.
- 5. Fig. 7: are the latitudes indeed colatitudes? Otherwise I don't understand how the top row can show the small ice cap instability, and the bottom row the large ice cap instability. Yes, the vertical axis should be colatitude this has been corrected.