

***Interactive comment on “Glacial  $\delta^{13}\text{C}$  decreases in the western South Atlantic forced by millennial changes in Southern Ocean ventilation” by Marília C. Campos et al.***

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I suggest to the authors to consider our relevant recent modeling work, which suggests a different mechanism for the CO<sub>2</sub> increase during H-events. As shown in Schmittner and Galbraith (2008, *Nature*, 456, 373-376, doi:10.1038/nature07531) an AMOC shutdown causes a decrease of the efficiency of the biological pump, which leads to an increase in atmospheric CO<sub>2</sub> consistent in both amplitude and rate-of-change with ice core observations. Schmittner and Lund (2015; *Climate of the Past*, 11, 135-152, doi:10.5194/cp-11-135-2015) show that this leads to a decrease of surface ocean (and atmospheric)  $\delta^{13}\text{C}$  that is particularly strong (more than 0.5 permil) in the South Atlantic (their Fig. 5G).

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Interactive comment on *Clim. Past Discuss.*, doi:10.5194/cp-2016-59, 2016.

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