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Equilibrium response of thermohaline circulation to large changes in atmospheric CO₂ concentration

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Figure 7 shown below replaces Fig. 7 of the paper entitled “Equilibrium response of thermohaline circulation to large changes in atmospheric CO₂ concentration”. The time series of the intensity of Atlantic thermohaline circulation from the 4x_C experiment in the original version of Fig. 7 is in error. It indicated incorrectly that the intensity of the thermohaline circulation (THC) becomes negative during the period between model years 500 and 1300 of the time integration. Although the intensity decreases to ~ 2 Sverdrup (Sverdrup = $10^6 \text{ m}^3 \text{ s}^{-1}$) between the 300th and 900th year as indicated in the revised Fig. 7 shown below, it never becomes negative throughout the course of the 4x_C time integration. The discussion of the 4x_C time series in the published paper is consistent with the corrected time series in new Fig. 7. The time series from other time integrations (i.e., control, 2x_C, and 1/2x_C) are correct, and remain unchanged in the revised figure.

Fig. 7 The temporal variation of the 100-year mean intensity of the THC in the Atlantic Ocean. Solid line: control. Dashed line: 2x_C. Dotted line: 4x_C. Dash-dotted line: 1/2x_C. Here, the intensity of the THC is defined as the maximum value of its streamfunction of the deep overturning circulation in the North Atlantic Ocean. Units are in Sverdrup ($= 10^6 \text{ m}^3 \text{ s}^{-1}$)

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