

## **Assessing Atlantic Overturning Circulation (AMOC) in CMIP5 models**

Wei Cheng<sup>†</sup>; Dongxiao Zhang

<sup>†</sup> University of Washington, USA

Leading author: [wcheng@u.washington.edu](mailto:wcheng@u.washington.edu)

Atlantic Overturning Circulation (AMOC) is a complex yet vital component of global ocean circulation. The AMOC has its intrinsic natural variability as well as responds to external forcing. AMOC behavior in previous generation climate models (CMIP3) has been summarized in IPCC AR4 report ([http://www.ipcc.ch/publications\\_and\\_data/ar4/wg1/en/ch10s10-3-4.html](http://www.ipcc.ch/publications_and_data/ar4/wg1/en/ch10s10-3-4.html)). Here we take a first look at AMOC streamfunction in available CMIP5 simulations of both present-day and future climates, and derive a multi-model AMOC index time series. The modeled AMOC time series will be put into context of late-20th-century to most recent observations. One goal of this study is also to assess if AMOC behavior in CMIP5 simulations shows any significant difference from previous CMIP3 simulations.