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Ocean Science
Discussions

Interactive comment on "Understanding mixing efficiency in the oceans: do the nonlinearities of the equation of state for seawater matter?" *by* R. Tailleux

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I am aware that the present manuscript is difficult to understand without access to my other manuscript (Tailleux, 2008). I had hoped that the latter could have been made available as supplementary material. As this is not possible, I have uploaded the manuscript to the ArXiv service, so that the manuscript is now available anonymously at the following address:

http://arxiv.org/abs/0903.1938

The manuscript is also available on my web page at: http://www.met.reading.ac.uk/∼remi/publications

I have taken note of the orther comments. I agree that I could probably improve the manuscript clarity with some effort, and I am ready to do that to facilitate the reading of the paper. D(APE) is the diffusive dissipation of Available potential Energy. The subcript r refers to the background reference state, as defined by Lorenz (1955). With regard to G(KE), its definition is provided just before equation 3 as: "the work done by the mechanical sources of stirring" (Munk and Wunsch (1998) assume that G(KE)=D(KE), i.e., that the rate of mechanical energy input G(KE) is balanced by viscous dissipation D(KE)).

I hope that this contributes to clarify things.

Interactive comment on Ocean Sci. Discuss., 6, 371, 2009.