

Interactive comment on “Influence of the Kuroshio on the water properties in the shelf” by T. Matsuno et al.

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Thank you very much for helpful comments to improve the manuscript. Followings are replies and what we revise the manuscript.

1. We agree to distinguish the Taiwan Warm Current (TaWC) from the Taiwan Strait Current (TaSC), and replace the terms appropriately.
2. We know the difference of the volume transport through the Tsushima Strait from that through the Taiwan Straits can provide the “net” Kuroshio intrusion and describe that in p.746. Indeed, it gives a lower limit and much more Kuroshio intrusion as internal motions can be expected, which has been described at the last paragraph of the section. However, to describe more clearly, we add an expression of “net transport of”

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at the end of the paragraph of p.746 again, as “concerning the net transport of Kuroshio intrusion.”

3. Hsueh et al.(1992) mainly discuss about the Kuroshio intrusion observed in April 1989. And their theoretical discussion concerns dynamical bifurcation of the Kuroshio which faces the step topography, and doesn't mention about existence of Taiwan Warm Current. So we don't think it is appropriate to compare with their results and discuss about the difference from those of Lee and Matsuno(2007). However, we realized that the explanation about the difference between Guo et al.(2006) and Lee and Matsuno(2007) should be revised. We add a description that the result from Lee and Matsuno(2007) is based on climatological data with 0.9 Sv for TaSC, and remove the previous explanation concerning the grid size of the numerical model. Instead, a description that reduced volume transport of the TaSC could enhance the Kuroshio intrusion onto the middle shelf area is added, and Lie and Cho (2002) is also referred to suggest the influence of volume transport of TaSC.

4. We enlarge some figures, particularly small letters, to see clearly.

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