

Interactive comment on “Statistical analysis of Lagrangian transport of subtropical waters in the Japan Sea based on AVISO altimetry data” by Sergey V. Prants et al.

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The author's respond to the Reviewer #1

Reviewer #1. Recommendation: The paper should be published after taking into account this deficiency.

Reviewer's comments Note, that the circulation of the Japan Sea was an object of study by many authors for a long time. In my opinion, this study lacked a comparison with the schemes of currents obtained, for example, in āĀ Chang, K.-I., Teague, S.J., Lyu, S. J., Perkins, H. T., Lee, D.-K., Watts, D. R., Kim, Y.-B., Mitchell, D.A., Lee, C.M., and Kim, K. Circulation and currents in the southwestern East/Japan Sea: Overview and

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review. *Progr. Oceanogr.*, 61, 105-156, doi:10.1016/j.pocean.2004.06.005, 2004. Holloway, G., Soul, T., and Eby, M. Dynamics of circulation of the Japan Sea. *J. Mar. Res.*, 53, 539-569, doi:10.1357/0022240953213106, 1995. Kawabe, M. Branching of the Tushima Current in the Japan Sea. Part I. Data analysis. *J. Oceanogr. Soc. Japan*, 38, 95-107, doi:10.1007/BF02110295, 1982. Kawabe, M. Branching of the Tushima Current in the Japan Sea. Part II. Numerical experiment. *J. Oceanogr. Soc. Japan*, 38, 183-192, doi:10.1007/BF02111101, 1982. Sekine, Y. Wind-driven circulation in the Japan Sea and its influence on the branching of the Tushima Current. *Progr. Oceanogr.*, 17, 297-313, doi:10.1016/0079-6611(86)90051-0, 1986. Senju, T. The Japan Sea intermediate water; its characteristics and circulation. *J. Oceanogr.* 55, 111-122, doi:10.1023/A:1007825609622, 1999. Takano, K., ed. 1991. *Oceanography of Asian Marginal Seas*, Elsevier, 431 pp. Yoon, J. H. Numerical experiment on the circulation in the Japan Sea. Part I: Formation of the East Korea Warm Current. *J. Oceanogr. Soc. Japan*, 38, 43-51, doi:10.1007/BF02110289, 1982. Yoon, J. H. Numerical experiment on the circulation in the Japan Sea. Part II: Influence of seasonal variations in atmospheric conditions on the Tushima Current. *J. Oceanogr. Soc. Japan*, 38, 81-94, doi: 10.1007/BF02110294, 1982. Yoon, J. H. Numerical experiment on the circulation in the Japan Sea. Part III: Formation of the nearshore branch of the Tushima Current. *J. Oceanogr. Soc. Japan*, 38, 125-130, doi:10.1007/BF02110283, 1982. You, Y., Chang, K.-I., Yun, J.-Y., and Kim, K.-R. Thermocline circulation and ventilation of the East/Japan Sea, part I: Water-mass characteristics and transports. *Deep Sea Res.* Part II: Topical Studies in Oceanography, 57, 1221-1246, doi:10.1016/j.dsr2.2009.12.011, 2010.

Our respond We thank the Reviewer for providing us the above mentioned references. We compared briefly in the revised text our averaged AVISO velocity field and its main large-scale features, including persistent mesoscale eddies in the basin, with the schemes of the Japan Sea (JS) surface circulation obtained in the references proposed by the Reviewer. We referred to most of those references in Introduction and in the first paragraph in Sec.3.1 in addition to already referred papers on this subject.



However, the main intent of our ms was not a review of currents in the JS and their variability but a Lagrangian statistical analysis of near-surface transport of subtropical waters in the JS frontal area.

Please also note the supplement to this comment:

<http://www.nonlin-processes-geophys-discuss.net/npg-2016-67/npg-2016-67-AC1-supplement.pdf>

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Interactive comment on Nonlin. Processes Geophys. Discuss., doi:10.5194/npg-2016-67, 2016.

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