

## ***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.

1. We agree that the descriptions on the exchange through the Luzon Strait were based on rather old works, and will add some recent works, which would make some changes in the understanding of the exchange. However, most of papers from the search results on AGU-EASI concern internal waves, solitons and tides generated around the Luzon Strait, and we don't refer them. We will add the works of Liang, et al. (2008), and Yuan, et al. (2006).

2. Seasonal variation of the Kuroshio 'axis' in the East China Sea has not been clearly reported, while seasonal variations in the vertical structure or volume transport of

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the Kuroshio have been discussed (e.g. Ichikawa and Beardsley, 1993; Ichikawa and Chaen, 2000; Oka and Kawabe, 1998). In actual, the Kuroshio meander is frequently found and may be predominant rather than the seasonal variation along the continental slope. It is hard to extract seasonal variations from the limited data along regularly observed hydrographic section. On the other hand, there are a few works where the migration of the Kuroshio in the area northeast of Taiwan has been discussed using results of mooring array, HF radar or satellite altimeter data, while they discuss the relation to wind fields or eddies activities instead of the seasonal variation. We will add some description about variation in the Kuroshio axis and strength in the revised form.

3. Indeed, we might have missed to refer some important papers related to our concern. We agree to add more papers to improve our discussion. Teague et al. (2006) should be referred to discuss the volume transport through Taiwan and Tsushima Strait. And Chuang and Liang (1994) will be also added to discuss the Kuroshio intrusion northeast of Taiwan, while it was a little older work. Furthermore, we will refer Zhang et al. (2007) in the section 3.5 comparing with the previous description about chemical evidence.

4. We agree that the title might not be fitted to the contents of the manuscript. So we will change the title, for example, into “Water exchange between the Kuroshio and the East Asian marginal seas; South and East China Seas”

5. We will add color bars and unit of DO on the figures.

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