

## ***Interactive comment on “A clustering analysis of eddies’ spatial distribution in the South China Sea” by J. Yi et al.***

**J. Yi et al.**

yijw@lreis.ac.cn

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Thank you very much for the helpful comments. The suggestion about the analysis of eddy trajectories is quite appreciated. The other anonymous referee also mentioned the same idea. In fact, we have started the study on eddies’ trajectories, and we hope the study can make more contribution to this area.

Response to comment 1:

First, thank you for pointing out the mistake of “Levene’s for normal distribution”. The correct name is the Lilliefors test for normal distribution, which is an adaption of the Kolmogorov-Smirnov test. Further information can be refereed to Lilliefors, H. (June 1967), "On the Kolmogorov–Smirnov test for normality with mean and variance un-

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known", Journal of the American Statistical Association, Vol. 62. pp. 399–402.

Second, in statistical hypothesis testing, the threshold of significance level (P-value) is usually 0.05 (<http://en.wikipedia.org/wiki/P-value>). If the value is smaller than 0.05, then the null hypothesis will be rejected. On the contrary, if the value is larger than 0.05, then we fail to reject the null hypothesis at the 0.05 significance level. This is the reason why we wrote “at the 0.05 level” (p. 3457, l. 4) without mentioning the actual values.

For the same reason, the significant value (0.061) of AEs in Lilliefors test for normal distribution is though small, it is larger than 0.05. So we do not have sufficient evidence to reject the null hypothesis that it is normal distribution. Therefore, t-test for AEs is acceptable at 0.05 significance level.

Finally, we made a mistake over the footnote “a”. Depending on whether the variance is equal or not, the t-test has two different algorithms to produce significances. “a” is meant to indicate that the significance was computed under the assumption of unequal variance, while others were computed under the assumption of equal variance.

Response to comment 2:

The sentences will be rewritten as the comment suggested.

Response to comment 3:

Thank you for this valuable comment. We will rewrite those sentences as the comment suggested.

Thanks for all valuable comments as well as technical comments, we will carefully revise the paper according to them.

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Interactive comment on Ocean Sci. Discuss., 9, 3451, 2012.

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