Nonlin. Processes Geophys. Discuss., 2, C399–C400, 2015
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Nonlinear Processes in Geophysics
Discussions
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Interactive comment on "Intermittent particle dynamics in marine coastal waters" *by* P. R. Renosh et al.

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Received and published: 5 September 2015

Referee: In equation 5 it is unclear why the index runs from 6 to 31, especially then several times in the paper it is stated that 4 classes are used. Please clarify.

The reason of size classes selected from 5 to 31 is mentioned in the section 2. In situ data line number 20 onwards. "Because of instability in the smallest and largest size classes, the data recorded in the inner and outer rings are excluded from further analysis (Traykovski et al., 1999; Jouon et al., 2008; Neukermans et al., 2012)". We will modify the revised manuscript to make this more clear.

These instabilities observed in the smaller size classes have also been related to effects of stray light (Reynolds et al., 2010). This has been explained detail in Renosh et

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al. 2014.

Referee: In equation 6 the notation C_s (the autocorrelation of the entropy S) is used without having been introduced. Please correct.

The autocorrelation of the entropy will be introduced after equation 6 in the revised manuscript.

Referee: $a(t)$ in equation B3 should be uppercase or all the other lowercase.

The local amplitude ($a(t)$) mentioned in the submitted paper will be changed as $A(t)$ in the revised version.

Referee: The determination of the Hurst exponents should go along with an estimation of the uncertainty; as error bars are calculated in Figure 8e, propagating the error for the determination of the slope should not be an issue. This would allow assessing if the observed differences in Hurst exponents are significant or not.

The Hurst exponent derived for $cp(670)$ and $Cvol - total$ are -0.06 ± 0.01 and -0.08 ± 0.01 respectively. These changes will be incorporated in the revised manuscript.

Interactive comment on Nonlin. Processes Geophys. Discuss., 2, 1033, 2015.