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Atmospheric Measurement Techniques Discussions

Interactive comment on "Measurements of Ozone Deposition to a Coastal Sea by Eddy Covariance" *by* David C. Loades et al.

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Response to Referees' Comments We thank the referee for their comprehensive and constructive comments on our manuscript. Below, we address each specific point in turn:

Linear detrending is often followed by time-tapering, e.g., by a Hamming window. Was this done?

Time tapering has not been used in this work – instantaneous fluctuations have been determined directly from the linear trend of each averaging period.

For fixed tower sites, a planar fit (Wilczak et al) or some other triple-rotation method is often used. Perhaps this should be investigated, particularly because it could be an

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issue for small fluxes.

Early in the data processing, the effect of using planar fit method in place of double rotation was investigated. A general planar fit method with one set of rotation coordinates is clearly inappropriate for our site on a headland. A sector planar fit (10°) however agreed well with the double rotation method. Given the small difference (∼4%) in fluxes, we chose to pursue double rotation, and avoid the disjoint in tilt angles experienced by a sector planar fit approach.

A small section detailing this has now been included in the paper where the double rotation application is discussed.

Suggest figure 7 be rescaled with a lower limit of at least 10ËĘ-9. Two or three very small outliers are compressing the real data.

Figure 7 (now Figure 5) has been rescaled to a lower limit of 10-9 m as suggested. The caption has also been updated to acknowledge the points beyond this boundary.

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