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## ***Interactive comment on “Operational SAR-based sea ice drift monitoring over the Baltic Sea” by J. Karvonen***

**J. Karvonen**

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Dear Ocean Science Reviewers and Editors,

I have updated my manuscript, trying to take into account the reviewer comment. I want to thank the reviewers for good and constructive comments. Here is also my response for the reviewers.

Comments for reviewer 1:

I have made the suggested changes.

Comments for reviewer 2:

I have updated the introduction, and also listed the differences between the phase-

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correlation algorithm by Thomas et. al. (2004, 2008). I have also added references and shortly described the existing methods of motion detection from image pairs, also passive microwave. I also some sentences about the affect of the SAR band (according to our experience there is not much difference and the same features are typically visible at L-, C-, and X-bands, and they can even be used together with different bands in the two images of one image pair, in some cases there is some additional visible information at L-band compared to shorter wavelengths).

I added more text in the validation section. Also tabulated some computed error measures. Unfortunately all the long motion data has a low quality value of two, higher quality values were found for short motion only, the results for the short motion are sorted by the quality values (range here 2—4), and also drawn in the figure with different colors. I have also tried to provide some critical assessment in the validation and conclusions sections. Within FMI we have found the results useful for model validation and for improving our sea ice SAR algorithms, we have not received feedback from other MyOcean users. The ice conditions in the Baltic Sea during the season 2011–2012 were not good, and we still have not got good validation data over the Gulf of Finland.

Unfortunately comparison to other algorithms would require their implementation and running the algorithm for the season, and then performing the validation. This would be a vast amount of work and we are not able to perform this within the small resources allocated for MyOcean at FMI.

## Minor issues:

I have replaced the figures 1 and 2, I hope they are more clear now.

I have changed the axis scaling of figs 8-10, included the x=y lines, and used colors for the different quality values (only for the short motion case there exist more than one quality labels).

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The updated manuscript in PDF is here as a supplement. Please, let me know if there is something missing.

I also have one question for the editor as I am not familiar with Your practices: How should I deliver the updated manuscript? Is it possible only after the discussion is closed or is it ok to put it as a supplement (as I just did)?

Sincerely, Juha Karvonen

Please also note the supplement to this comment:

<http://www.ocean-sci-discuss.net/9/C382/2012/osd-9-C382-2012-supplement.pdf>

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Interactive comment on Ocean Sci. Discuss., 9, 359, 2012.

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9, C382–C384, 2012

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