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Comment

## ***Interactive comment on “Intertidal finger bars at El Puntal, Bay of Santander, Spain: observation and forcing analysis” by E. Pellón et al.***

**E. Pellón et al.**

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Dear Prof. Edith Gallagher,

We wish to thank you for your constructive and positive comments that helped to improve the paper. We took into account all of them to write the revised version of our manuscript. Moreover, other changes have been made as suggested by the other reviewer.

The main changes concern (please see the new manuscript; italic font indicates new text, strikethrough font indicates old text):

- Section 2 (Field site and video imagery) restructured. We add section 2.3 (3-D geometry) and section 2.4 (Piecewise regression of the bar movement). Changes have

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been made in Fig. 8 (new manuscript).

- Section 4.2 renamed, restructured and shortened. Particularly, we removed the analysis of the wave energy flux ( $P$ ,  $P_Y$ ) as well as  $S_{xy}$  (Fig. 10 and Fig. 11 of the new manuscript have been simplified).

- Section 4.3 (Sediment transport) restructured, shortened and improved.

o Section 4.3.1 (Soulsby and Van Rijn formula) describes the sediment transport formulation. The analysis by considering a constant wave stirring has been removed (Section 4.3 Sediment transport; Fig. 14).

o Section 4.3.2 (Tidal correction factor). A new tidal correction factor is defined. In the previous version of the manuscript, we introduced a tidal factor that depends on the tidal range only. The new tidal correction factor depends on the hourly tidal level. Emphasis on this factor and details on its formulation have been given in the new section 4.3.2 (Tidal correction factor) with the help of two new figures (Fig. 12 and Fig. 13).

o Section 4.3.3 (Results). The sediment transport has been averaged over the same time intervals as the bar migration (see red lines in Fig. 14)

- English errors. The two reviewers have indicated editorial/english errors that have been corrected.

Please find on the attached file our reply to your comments (blue font indicates your comments, black font indicates our answer) as well as the strongly version of our manuscript: “Intertidal finger bars at El Puntal, Bay of Santander, Spain: observation and forcing analysis” (italic font indicates new text, strikethrough font indicates old text).

We hope that the new manuscript will be evaluated positively.

Yours sincerely,

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(on behalf of all authors)

Erica Pellón

Please also note the supplement to this comment:

<http://www.earth-surf-dynam-discuss.net/1/C724/2014/esurfd-1-C724-2014-supplement.pdf>

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Interactive comment on Earth Surf. Dynam. Discuss., 1, 673, 2013.

**ESurfD**

1, C724–C726, 2014

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