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Comment

Interactive comment on “The open boundary equation” by D. Diederer et al.

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With this short note, I reply to one of the points raised by Anonymous Referee 1 that was not completely addressed in Dirk Diederer’s reply.

“4) Page 934, line 20, give some details concerning the way the open landward boundary condition is imposed in the numerical model. Which are the limits of the chosen approach?”

Several options have been tested in the one-dimensional model to impose an open boundary at the landward end of the channel, with the goal of reducing the reflection originated from a boundary condition that is introduced to simulate its absence. The results shown in the manuscript were obtained with a very simple and commonly used

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technique: a fictitious state $n+1$ is defined (with n the index of the last grid point) where water level and discharge are assigned as in the last grid point n . This numerical scheme is termed as 'transmissive boundary' by Toro (2001) in section 9.2.5 of his well-known book (more than 1000 citations according to Google Scholar).

References

E. F. Toro (2001), Shock-Capturing Methods for Free-Surface Shallow Flows, Wiley, ISBN: 978-0-471-98766-6.

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