

## ***Interactive comment on “Impact of currents on surface fluxes computation and their feedback on coastal dynamics” by A. Olita et al.***

### **Anonymous Referee #1**

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In my view the manuscript, as it is, is a flawed study that does not deserved to be published.

Taking into account the currents is a good idea for sure and the authors should be commended for doing so. However, the main problem is that they have not even considered the possibility that the bulk formula itself is wrong: —The bulk formula was obtained from tropical studies and although it fits somehow with the Mediterranean Sea, it is not ideal. —The use of stress obtained from a wave model should have been considered. This is the strategy used by ECMWF.

Thus the authors should extend their study by considering other possibilities of errors in the computation of the surface stress. Other issues I have with this paper is that it is very much dominated by the boundary conditions on al 4 boundaries which make a

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comparison quite hazardous.

Minor questions: —What method is used for bathymetry smoothing? What is rx\_0 and rx\_1? —The wind speed is in ROMS at rho points and the currens at u and v points. How is the interpolation done?

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