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Discussions

Interactive comment on "Large submarine earthquakes occurred worldwide, 1 year period (June 2013 to June 2014), – contribution to the understanding of tsunamigenic potential" *by* R. Omira et al.

Anonymous Referee #3

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Review of the manuscript: "Large submarine earthquakes occurred worldwide, 1 year period (June 2013 to June 2014), – contribution to the understanding of tsunamigenic potential" by Omira et al.

The manuscript aims to provide a contribution to the tsunamigenic potential of submarine earthquakes on the basis of the seismic events occurred in 1-year period (June 2013 - June 2014). The number of considered seismic events in this time frame is 23, of magnitude Mw greater than or equal to 6.7 (from GCMT catalog). The authors aim

to provide some general conclusions on the basis of their analysis as contribution to tsunami catalog compilation and tsunami potential understanding.

The general impression is that, from a technical point of view, this manuscript could fit the aim and scope of the Journal: the text and its structure make the paper well readable and understandable. Nevertheless, I found that this study needs more work in terms of discussion and presentation of the results. The document is a good report of the activity but conclusion are presented in a too simplicistic way. In particular, I was not able to answer the following question: which is the concrete advance in knowledge with respect to previous studies? This is not completely clear in my opinion, and I suggest the authors to deepen their analysis.

I'll try to explain better my doubts. The main issues that should be addressed, in my opinion, are the following:

1) I don't understand why the authors decided to limit their analysis to an earthquake catalog 1 year long only. The statistical part of their analysis would be more solid if based on a greater number of data. I think that they should extend the analysis to a longer time frame for earthquakes greater than 6.7 or at least support the choice of using only 1 year.

2) About numerical modeling. Which is the goal of this part of the work? Authors modelled the events which led to tsunami in the 1 yr time frame and they show the propagation of the 2014 Iquique event with a comparison with DART buoys for such event. From this, they state that numerical models are a robust tool for wave amplitude and arrival time estimation. But: COMCOT (and several other models) has been validated and used in many works and several papers treated the robustness and weakness of numerical models for different scopes in a much more detailed way. Moreover linear propagation in deep waters (the comparison with DART buoys) is something largely accepted in the tsunami community, assuming a good representation of the source and bathymetry and keeping attention to potentially dispersive effects under particular con-

ditions. Which is the advance or the conclusion? In my opinion, saying that numerical modelling is robust tool is not demonstrated here with just one simulation and for deep waters (DART are in deep waters) where non-linearity is not relevant. And, however COMCOT has been already validated and tested in many conditions. This part of the work sounds to me not really relevant or without a clear scope.

3) I also suggest to reduce the long description of the specific events and expand the comments and results (there is only one figure on results!). For example the authors could expand the discussion of the role played by depth and focal parameters with respect to the existing works and knowledge about this topic.

4) As minor change I would also suggest to correct "interpolate" with "interplate" (twice) at page 2, line 23.

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