

Interactive comment on “Numerical simulations of tsunami generated by underwater volcanic explosions at Karymskoye lake (Kamchatka, Russia) and Kolumbo volcano (Aegean Sea, Greece)” by M. Ulvrová et al.

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This is a very interesting paper regarding tsunami propagation processes and prediction of their effects after a major shallow submarine volcanic eruption. The model elaborated from the Karymskoye Lake data has been applied to the case of the Kolumbo submarine volcano in the central Aegean Sea and the tsunami characteristics have been computed for the vulnerable shores of Santorini Island. The paper is well organised and presented and I think it should be published after minor revision. Some

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points of concern are the following. 1) There might be a problem regarding the degree of validity of the Lake model used for the Kolumbo volcano in open sea conditions. This would be related to the multiple reflections within the lake system in conjunction with the absence of sea waves due to wind conditions in contrast to the open sea in Kolumbo where a few meters high sea waves may occur depending on the weather conditions at specific periods of the year. 2) The maps given at Fig.9 do not really show the width of the flooded coastal zone because of the scale. It might be possible to change the figure and give partial maps with some zooming in the key areas. 3) Regarding the comment by Konstantinou I think there is no possibility to assume a different location of the future Kolumbo eruption because the pre-1650 eruption occurred at the same location as this is observed along the slopes of the Kolumbo crater at about 450m depth at its northeast side (Nautilus cruise 2010) and additionally there are 4-5 previous eruptions below the present Kolumbo crater as this has been detected in the multi-channel air gun profiles by the University of Hamburg.

Please also note the supplement to this comment:

<http://www.nat-hazards-earth-syst-sci-discuss.net/1/C2158/2013/nhessd-1-C2158-2013-supplement.pdf>

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