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Discussions

Interactive comment on "Speeding up and boosting tsunami warning in Chile" *by* Mauricio Fuentes et al.

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Two remarks which may improve the paper:

(1) I see a logical inconsistency in this Manuscript. On one hand, Authors note that near-field tsunami heights are highly sensitive to slip distribution (e.g., Geist, 2002) and, accordingly, criticize pre-computed scenario databanks for their simplified slip models. On another hand, Authors propose to apply fast W-phase source model for real-time forecasting. But, W-phase CMT is a point source model; there is no slip heterogeneity inside that model. Whether slip distribution is assumed to be uniform, or "elliptical" – makes no difference in sense of source complexity. (One could pre-compute scenario databank with elliptical sources as well). Fast propagation simulations may improve

local early warning only in combination with fast complex source inversion (i.e., slip distribution). Authors do mention FFM modeling on their final flow chart, but there is no any discussion about how they are going to perform fast FFM inversion in 5-10 minutes.

(2) Authors propose linear propagation modeling to forecast tsunami coastal impact. They mention terms "run-ups" and "maximum inundation". However, both run-up and inundation take place on land whereas linear propagation is stopped at 100 m depth. There is no any explanation in the manuscript of how do Authors close the gap between the 100m-isobath and run-ups. Simple Green's law? Such an explanation is very important and must be present in the paper. Same for the non-linear simulations with JAGURS – did they compute the "true runup" over inundated topography (at 15 arc second resolution)? Or extrapolated from some offshore isobath as well? What is then exactly compared between the two models?

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