

Interactive comment on “Tsunamis boulders on the rocky shores of Minorca (Balearic Islands)” by Francesc X. Roig-Munar et al.

Anonymous Referee #1

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The paper by Roig-Munar et al. is interesting in general. However, the manuscript has some major issues related to the presentation of the data and other more formal aspects. On the one hand the introduction is over-referenced for case studies in the Mediterranean. On the other hand, important references are omitted. Statements like “Sedimentary records of tsunamis generated off the North African coast have been identified along the rocky coastline of Minorca,...”(l.24-25) come without reference. This sentence is rather a conclusion of the paper already. Page 2 line 1 starts rather abruptly with information on seismicity of Algeria – leaving the reader alone why this would be important. References are missing here as well and also in line 5, line 11. The introduction concludes with the statement that Roig Munar (2016) [how do you spell your name? with or without dash?] already identified the boulders as tsunamigenic

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and dated most of them. So what is the aim of this paper here? Later in the text you refer to Roig-Munar et al. (2017). How does the present study differs from this one. I realise that Roig-Munar (2016) is a (unpublished?) PhD-thesis but you treat it as published scientific results. You should clearly outline the aims of this particular study, which could well be the same aims as in the thesis. The method section is in part a discussion on volume estimation of boulders – and not a description of the methods that you applied in your study site. Which directly leads to the next problematic formal aspect of the manuscript: you have no paragraph in the study site. The reader does not get any information on the geology, tidal range (negligible?), wave regime, climate, tectonic setting. A description of the study site is mandatory. The result chapter starts with the statement that 24 areas were analysed. Which areas? The reader has no idea what you talk about. The height information on cliffs and boulders have no reference water level. What do talk about? Mean high tide? Mean sea-level? The SI-unit for a metric ton is “t” and not “T”. “Since the boulders do not record a single tsunami run-up, these figures can be estimated for the latest and most intense tsunami run-up” (p.4, l. 9-10): this is very confusing, why do they not record a single tsunami run-up? Line 6: storm wave. 7.5m (reference?) contradicts line 12 (8.5m). Line 13: the boulders have been interpreted as. . . by whom? Or do you mean: we interpret these boulders as. . .? The same statement occurs in the following paragraphs. Line 27: regional wave height 8m – reference is missing here. Chapter 3.5: how can you 14C date something to 1964 AD? We need a table of your dating results. The last paragraph in this section is not results but discussion. Chapter 4: I do not see a strong relationship with seismic activity. You have not shown this in the manuscript. In line 27 you write the following statement: “Glacial deposits only register the largest tsunami”. At the moment the conclusions are not backed by the data. We need information in the dating, historical seismicity, historical records of tsunami, etc. Good luck

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