

## ***Interactive comment on “On soil textural classifications and soil texture-based estimations” by Miguel Ángel Martín et al.***

### **Anonymous Referee #3**

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The objective of this manuscript was to test the hypothesis that other fraction sizes in the triplets may provide better representation of soil texture for estimating some soil parameters. This is an interested topic and the authors have provided a profound and sound research on this. The English of this manuscript is fluent and easy to follow. In addition, this study was based on a large data set with 6300 soil samples. The previous reviewers have provided valuable suggestions and comments for this manuscript. Therefore, I found this manuscript can be accepted for publication once the following comments are addressed.

1. when we use pipette method or sieve method to test the particle size distribution, we only get limited fractions. The authors used a self-similarity model to reconstruct the distribution of particle size distribution based on the limited fractions. However, I am

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wondering whether there are other models to do this job? Why the authors selected this model? Have you or other studies compared different models?

2. what kind of linear regressions were used in this study, as well as the other statistical methods, should be included in the M&M section.

3. This manuscript tested the hypothesis for estimation bulk density. But people may be more curios about other properties like soil hydraulic properties. will this new law of particle size fractions will work fine for these parameters? maybe the authors should include this in the discussion.

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Interactive comment on Solid Earth Discuss., <https://doi.org/10.5194/se-2017-84>, 2017.

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