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## *Interactive comment on* "Shallow Geophysical Techniques to Investigate the Groundwater Table at the Giza Pyramids Area, Giza, Egypt" *by* Sharafeldin M. Sharafeldin et al.

### Anonymous Referee #4

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The paper deals with an integrated geophysical study to characterize the Giza Pyramids Area. Considering the area in which GPR, ERI and SSR data were collected, the paper could potentially be interesting. Unfortunately, in the present version of the manuscript, data integration and interpretation must be largely improved. The main criticisms concern the interpretation of the geophysical data which is almost totally missing. in what follows, i am listing the main points that have to be adressed:

- The conclusions are not supported by any interpretation of the geophysical results.

- As an example, commenting figure 8, the authors state « GPR profiles might detect the perched ground water table at shallower depth from ground level (Fig. 8) ». Which

are the elements of figure 8 which support this assessment?

- Furthermore, since all the ERI investigations are carried out in the same area, they should be presented by using the same colour range.

- In figures 5-10, the calculated and measured arrival time is shown but I didn't find any reference to it into the text.

- From the SSR results, 3 main strata are clearly present. It is also that their thickness varies area by area. Was this information used to create figures 11 and 13?

- A geological interpretation of the ERTs (ERI) in the text is missing; it is hence not clear how the stratigraphic columns in figure 11 were created.

- Without any interpretation of the geophysical data, the sentence «The present geophysical surveys proved that, the pumping system installed by AECOM 2010 lowering the groundwater levels in some piezometer and a need of more pumping to compensate the recharge of the water leakage resulted from surrounding area of Sphinx. » cannot be supported.

- It is difficult to understand how figure 11, 12 and 13 were created. In figure 13, an inferred fault is also indicated. The authors should show and describe from which kind of data this feature has been inferred.

Interactive comment on Geosci. Instrum. Method. Data Syst. Discuss., https://doi.org/10.5194/gi-2017-48, 2017.